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Part First.

ORIGINAL COMMUNICATIONS.

Article I.—*Introductory Lecture, delivered at the Inauguration of the Practice of Physic Department of the New University Buildings.* By Professor Grainger Stewart.

We are met upon an occasion which must be recognised as of the utmost importance in relation to the teaching of medicine in Edinburgh and, as we shall hope, to the advance of medical science. To-day we inaugurate another portion of the splendid buildings which the liberality of the community and of the Government has enabled the University to dedicate to the study and the teaching of the science and art of medicine. It may, I think, safely be said that no other university is able to offer so magnificent a home to its Medical Faculty. Let us resolve so to teach and so to learn, that our work may be in some degree worthy of these noble buildings.

Most naturally, on such an occasion, we turn our eyes to the past, and think of the long array of physicians who have gone before us, and of the progress which our art has made as the result of their great labours. And not less naturally we survey our present position, and look towards the future, in the hope that we may obtain some slight forecast of what it may have in store for us and for our successors.

Let us first turn to the past, and take a rapid survey of certain typical stages or phases of our art, and which are, if duly pondered, in my opinion fitted to yield us instruction and interest of a peculiar kind.

The first reference which I shall make is to a phase best known to us in connexion with the practice of the early physicians of Greece. When I say early, I mean those prior to the time of Hippocrates—that is, to the fifth century before Christ. This phase may, however, be traced in any infant civilisation, because it is the outcome of the natural effort of the human mind, even in its untutored condition, to relieve suffering and cure disease. It is characterized by the empirical application of such remedial agents as are supposed to have been found servicable in conditions apparently similar, and by the haphazard trial of new agents. The practice must therefore have been, at best, traditional and empirical, often largely mingled with superstition, and disfigured by the most extraordinary and unreasonable rites. The practitioners of those days were usually priests, and the patients congregated in the vicinity of the temples. Sometimes the temples were erected beside mineral springs, sometimes they were situated in specially salubrious localities. In the temples dedicated to such work there were records of past cures which guided the priest-practitioners in the application, and encouraged the patient in the use of the treatment. The study of medicine in those days—or, rather, the initiation into its practice—must have been of the most unsatisfactory kind. The novitiate would be spent in picking up the traditional formulæ and plans of treatment, learning a system of mere routine, and with little encouragement to reasoning as to the causes or nature of disease or the action of remedies.

Happily a brighter day dawned for medical science, and through it for humanity, on the appearance of Hippocrates, justly termed the Father of Medicine. His was perhaps the greatest mind that ever devoted itself to the study of disease. Although inheriting the traditions of the Asclepiadæ, being a member of that priestly medical race, he was not content to tread in the beaten track, but set himself to observe, to study, to reflect. He watched diseases carefully in their successive phases, and noted them with marvellous accuracy. He tested by observation and experiment the value of the remedies held in repute, and manifested a philosophical freedom alike from credulity and scepticism as to their actions. He strove to regulate with wisdom the diet of his patients, and to improve their general hygienic conditions. He discovered, and in all his teaching insisted upon, the restorative power of nature, the *vis medicatrix naturæ,* and in his practice he sought to accommodate himself to its processes. Of the importance of this great principle we cannot speak too strongly. In these days we think of it rather as a law inherent in the tissues of the body, comparable with the law of the organic world that there is a natural tendency to return to the original type. We shall have occasion constantly, as we study medicine together, to see how this principle acts. Let time be given, and let the agent which has disturbed the natural processes cease to operate, and the tissues will manifest their power of returning to their normal condition. The aggregate of such tissue changes manifests itself in the restoration of the general bodily health.

Hippocrates embodied the results of his observations, investigations, and his reflections in books, which are universally prized as among the most interesting relics of antiquity. Nowhere in literature can we find more exquisite words than those in which he describes the difficulties besetting our work as students of the medical art,—words which are familiar in all civilized countries, and have been adopted by some of the most famous writers of many lands: "The art is long; life is brief; occasion sudden; to make experiment dangerous, judgment difficult." If you make a study of the Hippocratic writings (as I hope that some of you will) you will be amazed at the insight, the sagacity, and even the knowledge which they display.

But, unfortunately, he and all physicians for long afterwards laboured under one fatal disadvantage—they knew little or nothing of anatomy, and, consequently, had no correct ideas of physiology; and so, necessarily, they present to us the spectacle of fine intellects working at medicine without a sufficient substratum of scientific knowledge to guide their inquiries or explain their results. Had it been possible for them to build upon such a foundation as has been so carefully prepared for us, they might have achieved successes for which the world has had to wait for thousands of years. But in consequence of this ignorance the Hippocratic writings contain statements which a mere beginner in our day would be able to controvert, and which a thoughtless man might ridicule.

His lofty and philanthropic character could not brook the old traditional narrowness of admitting to the profession only those who were born into the families of the priest-physicians. He gave oral instruction in anatomy—as he knew it—and in medicine to every one who showed disposition and capacity to learn, and thus laid open the mysteries of medicine to the world at large. Happy must they have been who sat at his feet and looked into his serene and noble face, gathering from him the knowledge that his powerful intellect had derived from his wide and deep experience. For intellectual impulse and moral influence no student could have been more favoured. Although his work was done five centuries before the Christian era, its influence is lasting to this day over the whole civilized world.

We must hasten to consider that phase of medicine which we may say prevailed during the Middle Ages. It added little or nothing to our real knowledge, because it had to a large extent ceased to study nature for itself, was contented rather to cite old authorities, the Hippocratic writings, and those of Celsus and Galen. Servile submission to authority is fatal to progress in all sciences, and in none more than in medicine. For progress it is essential that the worker shall bring himself into vital relationship with the facts which lie before him. He observes them, classifies them, reasons about them, and in so far as may be necessary, subjects them to the test of experiment. There is little proof that such work was done by men of this type in the time to which I now refer. Francois Rabelais, although much more famous as a satirist than as a physician, may serve as an illustration of the physicians of that age. About the year 1530, at the age of forty-five, having thrown off his monk's habit and abandoned his monastery, as he had long before abandoned all faith in the monastic system, he resolved to become a physician, and entered the university of Montpelier. In consideration of his years, education, and abilities he was allowed to graduate within two months of the commencement of his studies, although I can find no evidence that he had previously addicted himself to the study of medicine; and a month or two later he was a recognised university teacher, and erelong a hospital physician. You may wonder what he was prepared to teach after so short a training. His lectures were upon the aphorisms of Hippocrates, and, somewhat later, on his book of prognostics. One can imagine the delight with which the intelligent student would listen to the prelections on the first aphorism of the first book, to which I have already referred, and to many others; but if he also followed in the hospitals, he would be bewildered with the difficulty of bringing his clinical observations into accord with many of the Hippocratic doctrines, and, with the dawning of better knowledge round about him, would be longing for the birth of a new science as well as a revival of the old.

Another type which we must ever honour is that of the great beginners of anatomical investigation—men like Vesalius and Fallopius, who laboured at the sciences which constitute the essential foundations of the medical art. Patient and most ingenious students of nature, they began to work at the right place, and without them the discoveries of a Harvey and the work of a Sydenham would have been impossible.

Another typical stage is that which we may call the stage of the system builders. There have been two great periods of system-building in medicine, but that to which I shall chiefly refer was in the last century. Writing a hundred years ago, William Cullen, who at that time occupied this chair, the greatest man who has ever held it, says, "When I applied myself to the study of physic I learned only the system of Boerhaave, and even when I came to take a professor's chair in this university I found that system here in its entire and full force, and even up to the time of writing, it was held to be authoritative in many places." It seems as if each of the great physicians of last century set himself to discover a system, a principle or group of principles, which should explain to him the facts of disease and guide him in its treatment. I do not purpose to ask you at present to listen to an explanation of the systems of Boerhaave and Hoffman, and Stähl and Haller, nor even to those of Scottish growth propounded by Cullen and by Brown,—a John Brown very different from him whose name we honour as that of the author of *Rab and His Friends* and of *Locke and Sydenham.* Suffice it to say that your predecessors in this university and in all the seats of medical learning in the world had to occupy themselves, amid more important work, with mastering the pros and cons of the different systems then dominant. It is now admitted, almost by common consent, that we have not yet in medicine arrived at the period for wide generalization and true system making, that our work is still rather the patient and laborious investigation of facts in all the various departments of our science and art. Still I think it could be shown, without much difficulty, and I think it well to say so here, that these systems, although they only had their day and ceased to be, served in their time good purposes.

But before I leave this subject I shall say a few words regarding what I may call the last of the systems, and certainly the most extraordinary ever invented--that devised by Hahnemann, and which still is so far accepted by many persons. According to this system it is impossible for us to know anything of the real nature of disease. All that we can know is the set of symptoms by which disease manifests itself. Medicines produce effects on the human body which are symptoms of disease, and a medicine which has the power of producing a certain symptom, is capable of removing the symptom and the disease to which the symptom is due. Hahnemann states further that medicines should be given in very minute doses, diluted and subdivided in an extraordinary degree. Adding, for example, two minims of aconite juice, mixed with an equal quantity of alcohol, to 98 drops of spirit constitutes the first dilution; one drop of that to 99 of spirit is the second; another of that to 99 of water or spirit makes the third; and so on to the thirtieth, or the 300th. And then of that he found that a few drops prove a potent remedy. If any one has doubts as to the precise value of these extraordinary revelations as to treatment, he may perhaps be guided by a consideration of the opinions as to the nature of disease propounded by the same authority. In the "Organon" he states that all chronic diseases are varieties of psora, syphilis, and sycosis. By the last he seems to me to mean condyloma; by the first he undoubtedly means itch. Now think of what effects flow from suppressed psora. I shall read you a passage: "Psora" or itch "is the one great foundation cause and generatrix of many other, yea, innumerable forms of disease, which, under the names of nervous debility, hysteria, hypochondriasis, mania, melancholia, imbecility, insanity, epilepsy, convulsions of all kinds, softening of the bones (rickets), scoliosis, kyphosis, caries, cancer, fungus hæmatodes, gout, hæmorrhoids, jaundice, cyanosis, dropsy, amenorrhœa, hæmatemesis, epistaxis, hæmoptysis, bleeding from the bladder and uterus, asthma, suppuration of lungs, impotence and sterility, megrim, deafness, cataract, renal calculus, paralyses, loss of sense, and pains of a thousand kinds which figure as separate entities in pathology."

Where could one find a more preposterous farrago of nonsense than this doctrine? A good deal may be heard in fashionable practice about suppressed gout. But suppressed scabies! It were absurd to argue on the subject. And I take leave to say that the other doctrines of this system-builder are equally unworthy of credit, being egregiously unsound in science and useless as guides in practice. As to the minute doses, we know that often the same medicines are taken in quantities vastly greater than those recommended by Hahnemann, without any appreciable effect. If, then, you believe that these smaller doses do produce palpable effects, you accept a position astounding to a logical mind, that the effect of a part may be greater than the effect of the whole. Then, as to the principle of similars which was promulgated as the sole law of therapeutics, whilst it is true that some cases can be adduced which give colour to the view, vastly more do not, and a large number illustrate the very opposite principle.

You are not to suppose that these several phases which I have represented to you in rough outline correspond to a regular chronological succession all over the world. On the contrary, at almost any time in the world's history you might find men worthy to be ranked among the most enlightened workers; and even in the best times you might find men who deserve to be assigned positions in the lower categories, viz., of the early historic or almost prehistoric stage of medicine.

Gentlemen, what is the type to which I desire to see you conform yourselves? It does not correspond exactly to any of those which I have named. The physician of our time ought to be well versed in the sciences of chemistry and natural philosophy; he should be stored with knowledge of the structure and functions of the organic world. In the course of these studies he should have learned habits of accurate observation, of cautious induction, and of inquiry suggested by rational speculation. He should have mastered human anatomy, and know well the functions of the body; he should know the morbid processes to which it is liable, and the symptoms and signs by which these processes manifest themselves; he should be acquainted with the actions and modes of employing the really important articles of the materia medica; and he should reverently recognise that his work is almost the noblest to which man can apply himself. Our ideal physician is proud of his profession of medicine, modest as to what the art has yet attained to, still more modest as to his own acquirements. He sets himself to study patiently and thoroughly the cases entrusted to him, and, after due consideration, and on what seems to him good grounds, to use all the means in his power for the advantage of the patient. He is thus not a routine practitioner; he wishes, as all should, to advance his profession as well as to advance in it, and therefore he so works and reasons that inevitably, from time to time, he is rewarded by the discovery of new facts; and if he continues to work, he will find that somehow he gets into relationship with all the men of similar aspirations and labours, and can appreciate their new facts with a readiness that were otherwise impossible. You well know that nowhere in the world do greater advantages exist for laying broad and deep the foundations of sound practical knowledge than you enjoy here, and I assure you that if you cultivate carefully the intellectual and moral qualities and habits to which I have referred, you will grow up to be physicians of the best type that the world has ever known.

Some of you, realizing the only too manifest imperfection of our art, and impressed by the pessimist views held by so many men whose judgment in other respects we value, may be inclined to doubt whether we are entitled to claim very much merit for medicine as it now exists. The late renowned Professor of Logic and Metaphysics in this university asked the question, in what respect modern medicine could be shown to be superior to that of Hippocrates, and doubted if it could be shown to be better at all. The great Napoleon said to his physicians during his last illness, "Your disgusting preparations are good for nothing. Medicine is a collection of blind prescriptions which destroy the poor, sometimes succeed with the rich, but whose results are more injurious than useful to humanity." And some of you will remember that passage of *Faust* in which Mephistopheles, in advising an ingenuous youth as to the choice of a profession, says,

> "The spirit of medicine is easy to be grasped;
> One studies through the great and little world
> To let things go in the end as pleases God."

With such opinions boldly expressed, we need not wonder that many think lightly of medicine (especially when they are enjoying good health), but I am persuaded that any one who duly weighs the evidence supplied by the history of the art and a study of its present condition will arrive at a very different conclusion.

Let us compare our position to-day with that of a physician so recent as James Gregory, who occupied this chair in the beginning of the present century. I am assured by Sir Robert Christison that his teaching, as well as his skill in practice, was of the very highest kind. Sir Robert said, in his address as President of the British Medical Association, that Gregory was the most captivating lecturer he ever heard, and gave to his students all that in those days could be given. Think for a moment of what has transpired since his time. Look first at our progress in respect of diagnosis and prognosis. We can now tell the condition of a heart with wonderful precision, and forecast the prospects of a patient suffering from heart-disease. We can detect the beginnings of pulmonary disease when it is still in many cases amenable to treatment. We can trace the evidences of its advance or of its decline. In diseases of the kidneys we can in most cases tell with precision the exact form of the malady, and the stage which it has reached. In regard to the diseases of the brain and spinal cord and nerves we are steadily progressing. Who dreamt in Gregory's days of thrombosis and embolism of the brain, of the various diseases of the cord which we know so familiarly as locomotor ataxy, spastic paralysis, and many other scleroses? What was then known of post-diphtheritic paralysis, or of the lesions proper to nerves? How important the revelations afforded by the ophthalmoscope in relation to many cerebral diseases, as well as other maladies. Think also of the importance of the discrimination of the different forms of continued fever—the practical importance, I say, in relation to saving life and preventing disease. In Gregory's day no one dreamt of discriminating between typhus and enteric fever, and, consequently, there was no clue to the investigation of the etiology of these maladies such as has been followed up with such marvellously good results.

But are we not entitled to claim that in regard to treatment also great progress has been made? Our increasingly accurate knowledge of pathology is of service only in so far as it helps us to a more competent and far-reaching treatment. I think that we may claim that the growing accuracy of our knowledge as to the actions and modes of action of remedies is enabling us in a considerable number of respects to fulfil indications afforded by the study of disease. Thus we have, in the management of cases of heart-disease, learned when to withhold and when to administer certain remedies, powerful for good and for evil according to the conditions under which they are employed. By their judicious use many a sufferer from cardiac disease is enabled to live, and even to work, for years, who would doubtless have in former days speedily succumbed to the dread malady. As to pulmonary diseases, perhaps it can scarcely be said that we have medicines of corresponding value to those for cardiac cases; still our resources for treatment are much better than they were, and every one knows that the prospects of a phthisical patient who is seen in an early stage are by no means so gloomy as they were in former times. In the treatment of the affections of the pleura, what vast improvements have been attained by the adoption of mechanical measures! And in the management of certain stomach diseases other mechanical methods have produced equally wonderful results. Many of you will remember a man, who was admitted to my wards last winter, who looked as if in the last stage of consumption, all the debility, emaciation, hectic, being, however, a consequence of dilatation of the stomach. You saw how, under the treatment devised by Kussmaul, his condition improved week by week, until he left the Infirmary a healthy man, fit for his ordinary occupation. I might refer to many other instances of improved treatment, some of which leave scarcely anything to be desired.

But the modern methods of statistical research enable us to present an overwhelmingly convincing demonstration of the advance of medicine as shown in the saving of human life. Take, for example, the recently published report of the Local Government Board for England and Wales:—

Annual Death-Rate per 1000.	1841–50.	1851–60.	1861–70.	1871–80.
All Causes, . . .	22·4	22·2	22·5	21·5
Seven Zymotic Diseases,	—	4·11	4·14	3·36
Fever, ...	—	0·91	0·88	0·49

In England and Wales the annual death-rate during the last decennium has fallen from 22·5 to 21·5 per thousand of population, and from zymotic disease from 4·14 to 3·36, while the mortality from fever alone has fallen from 0·88 to 0·49 per 1000. From these facts it follows:—First, That an immense saving of life has occurred during the past decennium—a saving of about a quarter of a million of human lives; second, that this diminution has, to a large extent, arisen from diminution of mortality from zymotic diseases. Look at this table showing the mortality from fever during the past ten years:—

1870, .	0·80	per 1000.			
1871, .	0·70	0·61 per 1000.	1876, .	0·44	0·38 per 1000.
1872, .	0·61		1877, .	0·41	
1873, .	0·58		1878, .	04.2	
1874, .	0·59		1879, .	0·30	
1875, .	0·55		1880, .	0·32	

You observe that steadily year by year improvement has taken place. The mortality has diminished from 0·80 per 1000 in 1870 to 0·32 per 1000 in 1880. Now, gentlemen, I claim that it is our profession which has saved that quarter of a million of lives in England. To a large extent the saving has been effected by prevention rather than by cure, although cures also may be justly claimed by us. The prevention has been the work of medical men; they have made the discoveries as to morbific agencies; they have awakened the public interest in the subject in so far as it has been awakened, and it is to them that the legislative measures are mainly due. What other agency is there that can claim to have saved a quarter of a million of lives? It takes even a formidable war to destroy as many. Think, gentlemen, of a population larger than that of Edinburgh saved in a single period of ten years. But, then, the deaths do not represent all, for, for each death in the community, there are many illnesses; and it is customary to reckon that for every fatal case there are twelve serious illnesses. We have thus three millions of formidable illnesses warded off by the precautions taken. Consider what every formidable illness implies in the way of expenditure, and loss of earnings, and you will see that not only is there a saving of human life, an alleviation of human suffering, but a saving of wealth, which is of great importance to the community.

Surely this testimony would satisfy the most sceptical as to what medicine is now achieving. But I wish to refer to one other kind of evidence, which is rapidly accumulating and which is full of promise. It is known to you all that when the poison of smallpox is introduced beneath the skin, it produces a much less severe attack of small-pox than it does when introduced in the ordinary way. It is possible that an explanation of this may be found in the fact that the subcutaneous tissue affords a much less favourable nidus for the primary development of the micro-organisms than do the mucous membranes to which it in ordinary cases is applied. You know also that in the case of small-pox, as of many other diseases, one attack in most cases confers subsequent immunity, and further, that the poison of cow-pox, which many believe to be that of small-pox passed through the body of the cow, when inoculated into the human subject, produces a mild disease, which confers a remarkable immunity from subsequent attacks of small-pox. Until lately we had made no approach to an explanation of this fact, but certain discoveries of the last eighteen months seem to throw light upon the process. Some of you will remember that in the opening lecture last session, I dealt with the subject of micro-organisms in relation to disease, and, among others, described two diseases due to that cause, viz., splenic fever of cattle, with its human congeners, wool-sorter's disease, and malignant pustule due to Bacillus Anthracis, and the disease known as cholera of fowls, which is distinctly traceable to another micro-organism. Splenic fever is a very malignant and rapidly fatal disease, but Pasteur,[1] to whom the world owes a profound debt of gratitude for his magnificent discoveries in connexion with the whole subject of parasitic disease, has succeeded in modifying the bacillus in such a way as that it produces only a mild malady, and yet one which confers immunity from subsequent attacks, even when the animal is exposed to the most virulent bacillus poison. He ascertained that at 107° to 110° Fahr., with observance of some other conditions, the culture of the bacillus may be carried on and yet no spores be produced; by degrees the vitality of the micro-organism diminishes, and after a time wholly disappears. During this period of diminishing vitality, he found that the culture exhibits a series of diminishing degrees of virulence, and that at last its power of exciting disease entirely disappears. On account of the immense social importance of these facts, Pasteur was asked to give a public demonstration of the effects of his system. Accordingly, 50 sheep were put at his disposal, and of these he inoculated 25 with the modified bacillus. Shortly afterwards, all the 50 were inoculated with virulent bacillus poison, and every one of those not protected took the disease and died of splenic fever within fifty hours, while the other 25 presented no symptom. It is always well to have such results as these tested by other independent observers, and I find that Bouley amply confirms Pasteur's results. On the 16th June of the present year he experimented upon 35 sheep, of which 16 were unprotected, while 19 had been inoculated after Pasteur's method. Into the whole 35 he inoculated a mixture of blood and splenic pulp from a sheep which had died four hours before from splenic fever. In three days 15 of the unprotected had died of anthrax, while the 19 remained perfectly well. Thus, you see that we have absolute demonstration of the possibility of rendering animals incapable of taking splenic fever.

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[1] At the time that the lecture was delivered I was not aware of my colleague Prof. Greenfield's claims to the credit of being the first discoverer in this matter.

In regard to that strange malady which has somewhat unfortunately been termed the cholera of fowls, though it has nothing in common with human cholera, excepting that it occurs as an epidemic, and is very deadly, there have been conclusive proofs that protection may be afforded by modifying the germ. Pasteur has found that he could produce this alteration by making his successive cultures at long intervals, and supplying abundance of oxygen. You all understand what is meant by cultures. Each one of these micro-organisms has one or more fluids in which it grows with great readiness. Chicken tea is that most appropriate for fowl cholera germ. If a single drop of the infected liquid be added to a quantity of sterilized chicken-tea, a rapid development takes place in the fluid. If a drop of this be taken and added to a new portion of sterilized tea a further development occurs, and so on—the virulence always continuing the same. But Pasteur found that if he greatly prolonged the intervals between each successive planting of his germs he had taken the first step, and that if he supplied oxygen freely he had taken the remaining step needful for the production of germs of weaker destructive power. And he found that this inoculation resulted in immunity from subsequent attacks, however virulent the poison which was then employed.

Had time permitted I should have liked to tell you about other discoveries regarding these matters, and particularly that of Chauveau, which seems to have proved that the severity of the attack is closely related to the number of bacilli introduced. I shall only take time to mention the remarkable statement of Gaultier, that during the past year he has discovered a method by which animals may be protected from the poison of rabies. He inoculated sheep with that poison in the ordinary way, and found them susceptible to its action. He then injected the poison into the jugular veins of sheep without producing any very marked effect, but when he attempted to produce rabies in these animals by the ordinary process of cutaneous inoculation, he failed to produce the disease. This discovery, if it should be confirmed, will, like that regarding anthrax, probably prove important in relation to the prevention of dreadfully fatal human disease. At all events, it is clear that we may justly suppose ourselves not far off from very important new discoveries in relation to the prevention of disease by processes akin to that introduced by Jenner. It may be that some day we may have children protected from scarlet fever, perhaps from hooping-cough and measles, as they now are from small-pox, and women may possibly be protected from the dangers of puerperal fever by simple and innocuous processes.

These discoveries have led me to speak of the possible future of our art; but it is not only in connexion with them that we are entitled to look for great progress, new remedies will be discovered fitted to alter physiological processes, others may be found which will compensate for defects in the organism—perhaps some which may modify anatomical changes by directly influencing the growth of tissues.

One of the most striking features of our age is the consentaneousness of thought. When a great event occurs, the whole world is simultaneously thinking of it. And the art of medicine benefits by this circumstance. Each striking discovery is known throughout the world within a few weeks of its publication, and the attention of observers everywhere is directed to the subject. Moreover, the general standard of professional information is steadily rising year by year. Therefore, as the whole medical world is thus working together, and working on a higher platform of general knowledge, new discoveries must be made more rapidly than ever before. These walls will witness the demonstration of things of which at present we do not dream, as year by year a higher and a deeper acquaintance with the truths of nature is evoking the unresting intellect of man.

May the work we are to do in this room be useful and a source of happiness to ourselves and to others, and may God prosper each of us, and all who may be our successors in this great School.

ARTICLE II. — *On the Development of Malignant from Non-malignant Tumours of the Uterus.* (From the Laboratory of Prof. Slawjansky's Gynæcological Clinic, St Petersburg.) By WILLIAM MASLOVSKY, M.D.

(*Read before the Edinburgh Obstetrical Society, 23rd November* 1881.)

FOR the last ten years it has been a question in gynæcology whether malignant tumours of the epithelial type (carcinoma) can be developed from adenoma. During this time the possibility of such a change has been discussed by pathologists.

In the year 1873[1] Dr Matthews Duncan and Prof. Slawjansky described a polypus removed in soft masses from the uterine cavity of a woman aged 52, whose hymen was entire. Considering the age of the patient, the general appearance, softness, and fragility of the tumour, Dr Duncan thought it was malignant; but Prof. Slawjansky, after a careful microscopical examination, decided that it was non-malignant, an adenoma uteri polyposum hæmorrhagicum.

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[1] *Edin. Med. Journal*, August 1873, p. 97, and *Obst. Journal of Great Britain and Ireland*, Nov. 1873, p. 497.

Six weeks after the operation Dr Duncan examined the patient on account of metrorrhagia, and found that the portio vaginalis uteri and upper part of the vagina was occupied by a growing tumour, which was easily torn, but did not bleed freely. In this case, therefore, there was recurrence of the adenoma.

Dr Duncan relates another case occurring in his practice, of a woman rendered anæmic by metrorrhagia. After dilating the cervix, nodular masses were discovered, and removed with forceps. The microscopical examination by Dr Hardie showed that the tumour differed but little from that described by Prof. Slawjansky. The points of difference are not mentioned. Dr Duncan observes that the woman was not benefited by the operation. These cases raised the question of the development of malignant tumours from adenomata which were not malignant.

In the year 1876 Klebs[1] suggested that carcinoma of the body of the uterus might be developed from polypous adenoma by proliferation of the glandular elements, but the occurrence was proved by the investigations of Breisky and J. Veit.

Breisky[2] describes the case of a woman, aged 36, who suffered from metrorrhagia. The portio vaginalis was entire, and numerous polypi were attached to the mucous membrane of the uterine cavity. Portions of the polypi were removed and examined microscopically by Prof. Eppinger, who found them to be adenomata. About four months later, on account of repeated metrorrhagia, the cervix was again dilated, and portions of tumour removed. This time they were different from those formerly taken away, being softer and more fragile, and having the appearance of carcinoma. Prof. Eppinger's examination showed that the glands, which at the first examination contained only cylindrical epithelium, were now lined by flat epithelium with carcinomatous prolongations into the underlying tissues.

Veit[3] describes the case of a woman, aged 57, suffering from metrorrhagia. A polypus of soft consistence was found in the dilated cervix, but on the next day, when it was to be operated on, it had disappeared, and its base, 23 centimetres in diameter, was found in the fundus. This was removed with a sharp spoon, and was about the size of a walnut. Microscopical preparations of the tumour showed some glands with a distinct lumen, and lined by cylindrical epithelium; others with distinct walls filled with epithelial cells of different forms and sizes, and amongst the glands, but apparently separated from them, masses of large epithelial cells. Veit considers that this case proves the development of carcinoma from adenoma, and that the carcinoma is formed, not from normal uterine glands, but from hypertrophic elements of adenoma. The investigations of Breisky and Veit thus confirm the anatomical transformation of adenoma into carcinoma, and establish two forms of carcinoma—the diffuse (Breisky), and the polypoid (Veit).

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[1] *Handbuch der Path. Anat.*, I. Band, II. Abth., 1878, S. 870.

[2] *Prager Med. Wochenschrift*, Jahrg. 1877-78.

[3] *Zeitschrift für Geb. und Gyn.*, I. Band, 1877, S. 467.

During the next four years nothing further was published on the subject. I was induced to take it up myself, by the rarity of the disease, and by the possibility of following on the same patient the various stages of the transformation of adenoma into carcinoma, and of establishing a differential diagnosis between them. I made use of pathological preparations of the uterus and of portions of tumours kindly supplied to me by Prof. Slawjansky from two of his cases. I shall first describe each case separately, and then compare them and make what deductions I can.

CASE I.—On the 23rd February 1878 the widow M., of the government of Twer, aged 78, came to Prof. Slawjansky's clinic. She complained of metrorrhagia, pain in the lower abdomen and kidneys, and an occasional fetid discharge. It appeared that the patient had never been pregnant. She had been ill for four months, and was greatly emaciated. The uterus was retroverted and much enlarged. Hard tumours were felt through the left vaginal roof, attached to the uterus near the base of the broad ligament. They moved with the uterus, and were not connected with the pelvic bones. Notwithstanding injections of ol. Martis into the uterine cavity, a discharge either of pure blood, offensive sanious fluid, or fetid purulent matter continued. Three weeks after her admission obstinate vomiting set in, and she died of exhaustion on the 6th of March. At the post-mortem examination changes of the organs, due to old age and chronic nephritis, were found. The chief interest attached to the uterus, which was much enlarged; its walls contained several fibroids, from the size of a pea to that of a walnut. There was an elevated ulcer, with ill-defined borders and spongy section on the right side of the fundus. In the uterine wall, beneath the ulcer, was a tumour the size of a hen's egg; the peritoneum covering it was free. On the portio vaginalis were several superficial ulcers. The length of the uterus was 12·5, the breadth 5·8 centimetres. Portions of the ulcer and whole uterine wall were removed in a sagittal direction, and hardened in a solution of picric acid, gum arabic, and absolute alcohol; and transverse sections made from them were stained with picrocarmine and with eosine.

The whole section, examined microscopically (Verick $\frac{3}{6}$), consisted of glands held together by a thin connective tissue network. The glands varied in the form and arrangement of their epithelial elements. The first variety was abnormally large utricular glands lined with moderately long cylindrical epithelium, arranged typically in one row at right angles to the gland wall, the cells containing well-marked oval nuclei. Several of the cells contained two or three large nuclei. Some of the glands had a normal lumen, others were dilated to form cysts, but in all the epithelium was typical. The epithelium of all these glands was sharply separated from the underlying tissues by a thin line containing here and there a nucleus (membrana propria).

The second variety were lined with a double layer (Fig. 1, *a*) of epithelium. The cells of the upper layer were cylindrical, fusiform, and goblet-shaped, and their nuclei appeared to be undergoing division. The upper layer was evidently derived from the lower layer by the division of its cells, as some nuclei in the lower layer were seen dividing. In most of the glands the upper layer was continuous, but in some it was present only at certain parts; here masses of polygonal nucleated cells encroached considerably on the lumen of the glands.

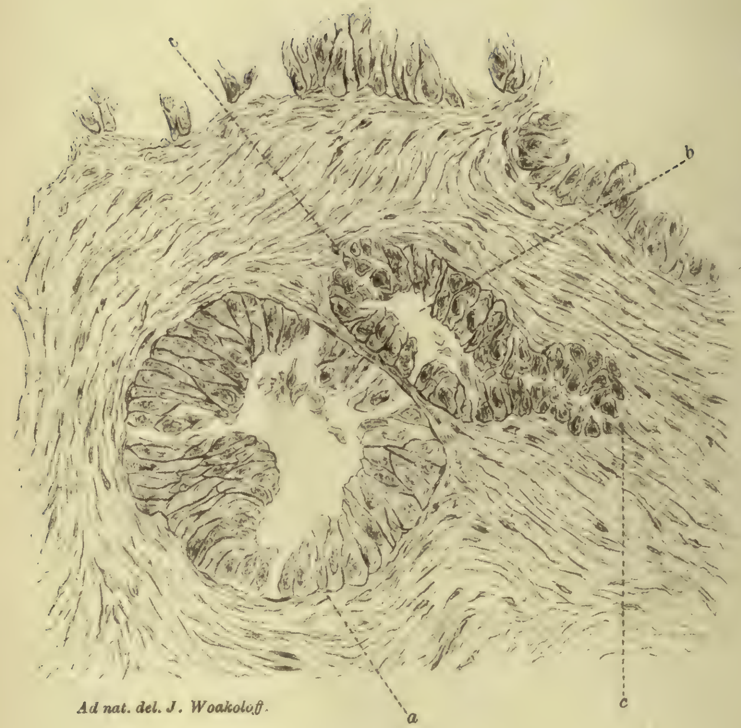
The third form of glands contained no lumen, but were filled with polygonal cells derived by division from the deeper layers.

In all the varieties the mural or deep layer consists of cylindrical, radially arranged cells.

Some of the completely filled glands were sharply separated from the underlying tissues; in others the polygonal cells passed through the gland wall at certain points and formed nests in the surrounding tissues continuous with the cells in the gland (Fig. 1, *b*). The penetration of the cells into the underlying tissues was seen, but less frequently, in the glands lined by a single layer of epithelium. Besides these protections of epithelium, other small epithelial masses were seen, evidently unconnected with the glands. From some of the glands sharply-bounded protrusions arose, lined with cylindrical epithelium, and between these glands the connective tissue was very thin, sometimes only one or two bundles of fibres separating them. The stroma consisted chiefly of fibres between which were fusiform cells. Few capillaries with blood corpuscles were seen. There were no granulation elements and no extravasations. At the periphery of the tumour muscular tissue appeared in the stroma, and here the completely filled glands were much less frequent.

Case II.—May 1881, S., aged 59. Catamenia appeared at the age of 12; regular since. Married at 16. Six children, the last thirty years ago. Good confinements. At the age of 40 she began to suffer from meno- and metrorrhagia. In 1868 a fibrous polypus was removed, but the menorrhagia continued. From the 29th of June 1880 the hæmorrhage was continuous but small in quantity, and in the following October she began to complain of pain in the abdomen. She took to her bed on the first of November. In January 1881 the index finger could be passed into the cervix, and came upon a small soft tumour in the cervical canal. The fundus vaginæ was indefinitely full or hard, especially to the right side of the cervix. In consequence of the fatness of the abdominal walls the outlines of the uterus and surrounding mass could not be defined.

During February the tumour in the cervical canal set up spasmodic pains, and by the 4th of March it formed a protrusion into the vagina of the size of an almond. It was dark red and soft, bled on pressure, and was attached by a stoutish pedicle to the interior of the uterus. The tumour and as much as possible of the pedicle were removed with forceps; the hæmorrhage stopped, and the patient felt better. On the 5th of April the hæmorrhage returned, with pains in the abdomen and slight fever, and she was obliged to take to her bed. On the 22nd a tumour like the former one, but attached to a thinner pedicle, and about the size of an almond, was found protruding from the cervix. A consultation was held, and two consecutive examinations were made, during and after which there was considerable hæmorrhage. The next day some clots were discharged, and on the day after that the tumour had disappeared. Douglas's pouch occupied by hard masses, cervix directed towards the symphysis. On the 1st of May the urine contained blood and clots. Microscopical examination of the urine revealed nothing but crenate blood-corpuscles. On the same day the patient became jaundiced, and the border of the liver could be felt. The masses of polypus which had been removed were soft and uneven, and contained extravasations both on the surface and internally. They were hardened with the reagents mentioned above, and the sections were stained with eosine. The microscopical characters (Verick $\frac{3}{6}$) of the tumours, though generally resembling those of the first case, presented several essential points of difference. In the proliferation of the cylindrical epithelium of the glands, and in the transition from glands lined with a single epithelial layer to those completely filled with cells, and in the infiltration of the adjacent tissues, the two cases were alike. The present case differs from the first both in the form and mode of growth of the epithelial cells into the underlying tissue, and in the nature of the stroma, the cells, both in the glands and stroma, being nearly cubical, and not of different shapes, as in the first case. In the first case the infiltrating cells did not extend far from the glands; here they are widely and irregularly spread in the tissues. A further peculiarity of the second case is the arrangement of the infiltrating epithelium in columns, as if it were in a tube which it does not completely fill, each column being surrounded by an empty space. The walls of the tube are smooth, and contain flat nucleated cells. The relations of the epithelium to the tubes is well seen where the latter are divided transversely. Externally is the tube wall, then a clear space, and in the centre the round transverse section of the epithelial column. The appearances lead us to believe that the epithelial cells spread through the lymphatic vessels (Fig. 2, *a*). In the second case the stroma is much more abundant than in the first, and the glands are separated by wide intervals. Another peculiarity of the second



Ad nat. del. J. Woakoloff.

FIG. 1.—*a*, Glandular cavity covered with epithelium, arranged in several layers; *b*, Glandular cavity, the epithelium of which is growing into the connective tissue, at both ends, *c*, *c*, the lining membrane (membrana propria) being destroyed.

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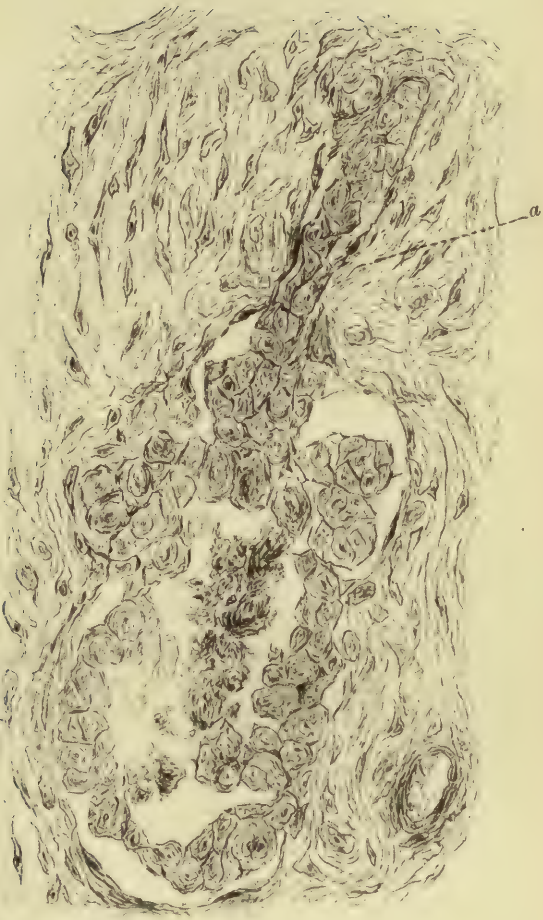

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FIG. 2.—Glandular cavity of which the membrana propria is lost. *a*, Epithelium of this cavity growing into one of the adjacent lymphatic vessels.

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case is the abundance of bloodvessels. Some of the capillaries are of large size, and explain the existence of the extravasations described above.

On comparing the two cases we see that they present a compound form of tumour. On the one hand are adenomatous cavities with typically arranged cylindrical epithelium, and on the other cavities developed gradually from them, completely filled with cells, and sending prolongations of cells into the neighbouring tissues. The transition is effected by the multiplication of the mural or deep layer of cylindrical epithelium in two directions, inwards to choke up the cavities of the glands, and outwards to infiltrate the tissues.

The epithelium filling the lumen of the glands is either multiform (first case) or uniform (second case). The lining cylindrical epithelium in the choked glands maintains its radial arrangement. The epithelium spreading in the tissues either simply separates the fibres in the neighbourhood of the glands, or infiltrates the tissues diffusely, or extends along the lymphatics. Both the histological structure and the clinical course (dissemination and rapid recurrence in the second case) oblige us to acknowledge the malignant nature of the final tumour (adenoma malignum). In anatomical structure the tumour is analogous to the form of carcinoma of the large intestine described by Klebs[1] under the name of epithelioma-cylindro-cellulare carcinomatosum. The above facts, establishing as they do a relationship between the benign and malignant polypous adenomata of the uterus, and explaining the origin of the latter, are of great practical importance in prognosis, for this must always depend upon the recognition of the malignity or harmlessness of the tumour.

The differential diagnosis of benign and malignant tumours depends upon their histological structure. In the benign the glands are abnormally large and contain a lumen which may be dilated to form a cyst, but all are lined with cylindrical epithelium. The epithelium is typically arranged,—that is to say, the cells are all placed at right angles to the gland wall, and are sharply separated from the subjacent tissues.

In the malignant, on the contrary, the epithelium is arranged in two layers, and may completely fill the cavity of the gland. The epithelium filling the cavities may be either uniform or multiform. In all cases the lower cylindrical layer of epithelium maintains its typical radial arrangement. In the last point the malignant adenomata differ from the carcinomata, in which the arrangement of the epithelium in the tissue spaces is different. The malignant character of the tumours is most marked when the epithelium is not separated from the underlying tissues — when it infiltrates them,—or spreads along the lymphatic vessels. In general it may be said that the uniform appearance of a harmless adenoma re-assures the gynæcologist, while that of the malignant, with its epithelium proliferating and spreading in all directions, involuntarily excites him to adopt a timely and energetic treatment as the only means of saving his patient's life.

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[1] Klebs, *loc. cit.*, 1869, S. 247.

Article III.—*Three Cases of Injury to the Bladder and Urethra.*

By J. Maxwell Ross, M.B., L.R.C.S. Ed.

I.—*A Case of Rupture of the Bladder complicated by Stricture of the Urethra.*

P. O'C., æt. 62, a hawker, residing in Edinburgh, was admitted to Ward X. on January 4th, 1881, at 7.30 A.M., suffering from retention of urine.

History.—Patient's statements were not very trustworthy, being rather contradictory in some points; but, so far as could be made out, he had gone home about 10 P.M. the night before somewhat the worse of drink. A family dispute arising, he was knocked down and kicked, among other places, on the lower part of the abdomen. At this time his bladder, he thought, must have been nearly full, as he had not emptied it for five or six hours. He tried to pass water through the night, but failed, and found himself compelled to come to the Infirmary early in the morning to ask relief.

Previous History.—Patient had not led a temperate life. For fourteen or fifteen years, and probably longer, he had been troubled with stricture, for which instruments were occasionally passed; but, owing to his irregular habits, the improvement effected was never very great.

Condition on Admission.—Notwithstanding his intemperate life, patient was a stout, healthy-like man, perhaps a trifle too fat, but not looking older than his years. There was not much apparent distention of the bladder, but there was dulness on percussion almost as far up as the umbilicus, and the patient complained of pain on slight pressure being made. He had also a black eye, and one or two excoriations on the legs. The conjunctivæ of both eyes presented a decidedly jaundiced appearance.

Treatment.—On his admission I tried to pass a catheter, beginning, according to the usual rule in a case of unknown urethra, with a large-sized instrument (No. 10, silver). This was stopped by a stricture in the spongy portion of the urethra, not far from the meatus. A smaller instrument passed this easily, but was stopped by a very tight stricture in the membranous portion. Along with these strictures there was so much congestion and pouching of the urethra that I considered it unwise to try too long with either silver or flexible catheters to reach the bladder. A warm bath was therefore ordered, and, as his rectum was loaded, an enema of castor-oil was given. He then said he felt a little more comfortable, but still failed to make water. Between 9 and 10 A.M. he was put under chloroform, and another attempt made to pass an instrument, but without success. I then determined to relieve the bladder by means of Dieulafoy's aspirator, and wait for Mr Bell's visit at 12 noon. With a fine hollow needle attached to the aspirator I punctured the bladder just above the pubes, and drew off 12 ounces of a bloody fluid with a urinous odour, and along with it numerous bubbles of some gas. The appearance of the blood and gas, and the comparatively small amount of urine withdrawn, made the case at once assume a very grave aspect. The blood pointed to some lesion of the urinary tract above the urethra. Patient at first could not or would not give any reason for the appearance of the blood. Only after close and careful questioning did he acknowledge that he had been kicked in the lower part of the abdomen. It was not so easy to get at the cause of the appearance of the gas bubbles. Where had they come from, and how had they originated? It was thought that there might be some defect in the aspirator, but a careful examination, and the subsequent cleaning of the instrument, showed that it was all right, and that the gas must have come from the bladder or its neighbourhood. The amount of urine drawn off (12 ounces) was smaller than one might have expected, seeing that none had been passed since 5 P.M. on the previous day, a period of over fourteen hours, during part of which time the patient had been drinking pretty freely. It was also noticed that the area of percussion dulness was not diminished by the withdrawal of the urine. The patient, however, expressed himself as feeling relieved by what was done. At the noon-day visit Mr Bell examined into the condition of the urethra, but, finding it so strictured and congested, considered a too prolonged attempt to reach the bladder improper. He ordered hot poultices to the abdomen, and recommended the use of the aspirator whenever the patient desired to make water. A morphia suppository was also given. The aspirator was used a second time that evening, and 10 ounces of bloody urine, accompanied by the gas bubbles as before, were drawn off. Temperature was then 99°·2 F.

Next day patient was moribund. Pulse rose to 140. He asked to have his water taken off in the morning, and again in the evening about an hour before he died. Each time about 12 ounces of bloody urine with gas bubbles were drawn off. He died at 9 P.M.

Post-Mortem Examination (Dr Hamilton's Report).

External Appearances.—Height 67 inches, circumference at shoulders 43 inches. Rigor well marked. Lividity very great on dependent parts. Pupils slightly contracted. Conjunctivæ jaundiced; also slight jaundice of whole body. Vessels of both conjunctivæ injected. Extravasation of blood into subcutaneous tissue around left eye-ball. A little blood was seen issuing from the urethra. There was an excoriation on the front of each leg; that of the left 3 inches, that of the right 6 inches, below the knee. Veins of left leg very varicose. Another slight bruise on outside of right knee, with a number of small bruises in front. Fingers of both hands very livid.

Heart.—Pericardial sac contained about a drachm of blood-stained serum. Right side distended with blood, left side firmly contracted and empty. Surface loaded with fat. Aortic valve competent. A few atheromatous spots on ascending aorta. Aortic and mitral cusps otherwise healthy. Muscular fibre healthy.

Lungs.—Pleural cavities both dry. Some old fibrous adhesions of right. Left lung weighed 1 lb. 5½ oz. A little calcareous nodule in pleura. Organ congested, and of a deep purple colour. Right lung weighed 1 lb. 5½ oz. Much congested, especially at base of upper lobe, where it seemed to be in a state of collapse. Bronchi in this part were all filled with catarrhal fluid. Slightly emphysematous at apex and anteriorly.

Liver.—Weighed 4 lbs. 9½ oz. Gall-bladder distended with ochre-yellow coloured bile. Organ cirrhotic, granular, and fatty.

Kidneys.—Left weighed 7½ oz. Numbers of considerably large-sized cysts on surface, which was slightly granular. Organ diminished in size, and probably slightly cirrhotic. Right weighed 6 oz.; in a similar condition.

Spleen weighed 8½ oz.; anæmic.

Stomach had a sour odour, and contained some partly-digested food. There were what seemed to be several small erosions or follicular ulcers on the mucous membrane.

Abdomen and Pelvis.—The fundus of the bladder came up to an inch below the umbilicus. Its anterior and posterior walls were in contact, and in front there was a rupture of the organ about 1½ inches long. Within the bladder there was a couple of ounces of fluid blood, with a strong urinous odour. Part of this blood, along with urine, was extravasated into the cellular tissue between the bladder and symphysis pubis. There was a congested area in the peritoneal coat of the bladder at the fundus, like a commencing peritonitis. The bladder had not ruptured into the abdomen, but a quantity of lymph was found on the coils of the small intestine. It appeared to be of recent origin.

Remarks.—Rupture of the bladder is an injury about the diagnosis of which there is not usually much difficulty. In this instance, however, the diagnosis was not at first sight easily apparent The presence of the stricture, and the fact that the man had been drinking on the previous evening, inclined one to think that there was nothing more than a severe case of retention to be dealt with. It was not till the aspirator had been used that the diagnosis began to be cleared up and the gravity of the case to be seen. The blood in the urine showed that there was some lesion of the urinary tract above the urethra. Rupture of the bladder was considered probable, but the site of the rupture was not so readily determined. It may be that the presence of the gas-bubbles in the urine was not appreciated as it ought to have been. In all probability this symptom was due to the condition of the cellular tissue in front of the bladder, for there infiltration of blood and urine was found to have taken place. A solitary case cannot, however, allow us to be too positive about the value of this symptom. Nor is it one we are likely to meet with frequently in cases of rupture of the bladder, for if the urine can be taken off by a catheter (and it generally can), aspiration will not be required, and without aspiration the bubbles are not likely to become apparent.

II.—*A Case of Peculiar Lesion of the Bladder accompanying or following Fracture of the Spine in the Dorsal Region.*

G. D. R., æt 69, clerk of works, residing in Edinburgh, was admitted to Ward X. on Tuesday, February 15th, 1881, suffering from the effects of a fall on his back.

History.—He was walking along the joists of a house in the course of erection at Drumsheugh Gardens, when he fell a distance of 12 feet, his back coming in contact with a heap of stones. He was at once removed to the Infirmary, where he was admitted in a state of shock, but quite conscious.

Condition on Admission.—He had complete paralysis, both of motion and sensation, in his lower limbs and about half way up his abdomen. The extremities were cold; the trunk and forehead bathed in perspiration. The radial pulse was too weak to be readily counted, but over the carotid artery 52 was made out. His temperature was 96°·1 F. He complained of pain in the back, about the level of the sixth dorsal vertebra. There was also some difficulty of breathing, but this soon passed off.

Previous History.—Very good. Patient had never suffered from either nervous or urinary trouble. He had always led an exceedingly temperate life.

Family History also good.

So far, the nature of the injury received was fairly manifest There was in all probability a fracture of the spine somewhere about the sixth dorsal vertebra.

Treatment.—Brandy internally, hot bottles to feet, and fomentations to the abdomen, were at once ordered. Morphia (one-third grain of the bimeconate) was injected subcutaneously to relieve the pain. The patient soon began to feel better, the pulse became stronger, and the temperature rose nearer the normal. Within an hour of his admission a catheter was passed without difficulty, but no urine flowed. The instrument (No. 12, soft indiarubber) was withdrawn, and following it came a drop of bloody urine. The catheter passed so easily that there was not likely to be any injury of the urethra which could account for the blood. Rupture of the bladder was at first suspected; but as the patient was positive that he had emptied it an hour before the accident, and there being no fracture of the pelvis, nor a history of injury to the anterior abdominal wall, it was difficult to see why this should have taken place. There might be rupture of the ureter or kidney; but both of these are comparatively rare accidents, and there was nothing in the other symptoms of the case to entitle us to diagnose either. Under the circumstances, it was considered best to pass the catheter again and leave it in the bladder attached to a long indiarubber tube which passed into a bottle of carbolic lotion.

Next day (16th) patient's colour was brighter. Pulse 72. Temperature normal. Abdomen slightly distended. In twenty-four hours less than one ounce of urine was passed.

17*th*.—Patient worse. Abdomen more distended than yesterday. Great pain. Pulse 78. Temperature 99·4. Urine passed in very small quantity, just sufficient to tinge the lotion which had been changed the previous day. No appearance of blood. Bowels moved slightly after an enema.

18*th*.—Patient died at 2.30 A.M.

After death a small clot was found in the eye of the catheter, but not so large as to prevent the passage of urine. The lumen was patent.

Autopsy.—Performed by Dr Hamilton 10 hours after death. *External Appearances.*—Height, 70 inches. Circumference at shoulders 44 inches. Body well nourished. Rigor well-marked. Lividity considerable on dependent parts. Pupils of medium and equal size. In the lower dorsal region there appeared to be a slight curvature of the spine.

On the chest and abdomen being opened it was found that there was a displacement of the vertebræ. The body of the sixth dorsal presented a sharp fragment. Further down one of the transverse processes projected considerably forwards. [Leave was not given for a complete examination of the spine and cord.] In the bladder there was a small quantity (about three ounces) of blood and urine. The mucous membrane was in a disintegrated condition. Large shreds of it came off on the slightest traction. In the substance and coats there was considerable hæmorrhage. There did not appear to be any direct perforation, but the coats were so thin that urine may have escaped through them. In the peritoneal cavity there was about an ounce of what appeared to be blood-stained urine, and a considerable quantity lay in the cellular tissue in front. Left kidney weighed 6¾ ounces. A little blood was effused into the cellular tissue round it. It was otherwise healthy and not ruptured. Right kidney also healthy. There was no injury of either ureter, and no fracture of the pelvis.

Remarks.—The most puzzling feature in this remarkable case is the urinary lesion. The diminution in the amount of urine is, I think, readily susceptible of explanation. There was, first of all, the condition of profuse cold sweat, in which the patient was when admitted; secondly, the fracture of the spine had probably caused what was practically a section of the cord in the dorsal region. It is an established fact in physiology that "section of the spinal cord below the medulla causes a great diminution, and, indeed, in most cases a complete or almost complete arrest of the secretion of urine. This operation, by cutting off so many vascular areas from the medullary vaso-motor centre (and possibly also by giving rise to a condition of shock in the spinal cord), leads to a very general vascular dilation, in consequence of which there ensues a great fall of the general blood-pressure. Although the renal arteries suffer with the rest in this dilation, still this is sufficient to compensate the greatly diminished pressure; and when the general blood-pressure falls sufficiently low, the secretion of urine is totally arrested" (Foster). Thirdly, if Mr Le Gros Clark and Mr T. Holmes are correct in the opinion they both appear to advance in their respective text-books, that "it seems not improbable that urine may be absorbed by the peritoneum," it may have been that more urine passed into the peritoneum than was found at the autopsy, and perhaps to some extent absorbed by it. The question, however, still remains, Why did so little urine pass? This may have been due to clot blocking up the catheter, but the clot found in it after death was not sufficient for that purpose. Perhaps there was some defect in the apparatus; but it was identical with one used very successfully in a case of fracture of the spine some months previously. It is also difficult to see a reason for the condition of the walls of the bladder. Why should there have been hæmorrhage? And why should the mucous membrane have been disintegrated? There was no history of injury to the anterior abdominal wall; and even had there been, it was not likely that the bladder in its contracted state should have received any injury. There was no previous urinary ailment, and softening of the mucous membrane of the bladder is an extremely rare condition, having been found only twice by Louis in five hundred cases, and once by Rokitansky after death from typhus. What the cause of death in Louis's case was, I have not been able to discover. In our patient there may have been, and probably was, some lesion of the vasomotor system, but I do not think that would explain entirely the condition of the bladder. The case is one involved in considerable obscurity. During its progress there was some temptation to wash out the bladder, but the condition found at the autopsy showed how dangerous that proceeding might have been. In all probability it would have caused a rupture, and the difficulty then would have been to decide to what the rupture was due.

III.—*A Case of Fracture of the Pelvis with Rupture of the Urethra, in which a New Method of Treatment was adopted.*

T. G., æt. 27, residing at Musselburgh, was admitted to Ward

X., Royal Edinburgh Infirmary, on 8th July 1881, suffering from the effects of an injury received on the same day in a coal mine.

History.—Patient, who is a healthy young man, was lying on his left side, engaged in picking, when a mass of coal, weighing about three tons, fell in a slanting direction on his body. He was got out within five minutes and taken home. His own doctor saw him shortly after the accident, and recommended his removal into the Infirmary, where he arrived about seven hours after the occurrence of the accident.

Condition on Admission.—Patient complained of pain in his chest and abdomen. On examination of the chest, four ribs were found fractured. The left leg was slightly everted, and movement of it caused pain in the pelvis. On the glans penis, and at the urethral orifice, there was a little dried blood. There was no swelling nor discoloration in the perineum, and patient had not made water since the accident. Fracture of the pelvis and rupture of the urethra were at once suspected, and on examination there seemed to be a deformity of the ramus of the pubis on the left side.

Previous History.—Good. He had never suffered from urethritis or other ailment of the urinary organs. His social history also seemed good.

Treatment.—After attending to the ribs, I endeavoured for purposes both of diagnosis and treatment to pass first a silver and then a soft catheter, but failed. A little fresh blood came trickling along the sides of the instruments. I therefore desisted, and proceeded to relieve the bladder by puncturing. The supra-pubic operation was done with Dieulafoy's aspirator, and 25 oz. of apparently normal, light brown-coloured urine were withdrawn. Mr Bell happened to be in hospital delivering his usual weekly lecture to the probationer nurses at the time patient was admitted. At the conclusion of his lecture he saw the case, confirmed the diagnosis, and approved of the treatment by aspiration, recommending that it should be gone on with in the meantime, and that the injured parts should be allowed to consolidate. The patient was therefore instructed not to try to make water himself, but to intimate when he wanted his bladder relieved. For twelve days this mode of treatment was persevered in, the bladder being aspirated in all thirty-six times, on an average thrice in twenty-four hours. From 8 to 12 oz. were removed on each occasion, the bladder never being thoroughly emptied. On the eighth day Mr Bell succeeded in passing a small flexible catheter, but as it caused considerable irritation it was not kept in. On the tenth day the patient endeavoured to make water himself, but succeeded in passing only one ounce. On the thirteenth day Mr Bell passed a No. 5 silver catheter. This was tied in for 32 hours. On the following day he was allowed to make water himself, and began to pass it freely. He remained in hospital till the fracture had united, and during the rest of his stay (which lasted till the 8th September) treatment was directed to the stricture which was forming. Before he left, No. 12 bougie was passed, and he got instructions to come back once a month for some time, to have the stricture dilated.

Remarks.—Aspiration of the bladder is a comparatively new, but a very safe operation. Its adoption in this case, though it may not have been the means of saving the patient's life, must at least be acknowledged to have materially lessened the risk of a fatal issue. Had a catheter been got into the bladder, and had the patient been able to allow it to remain there, aspiration would not have been required. The treatment usually recommended in such cases after failure to pass a catheter is, to incise the perineum deeply in the middle line. Had this been done, in all probability a simple fracture would have become compound, and the risk of urine trickling over the raw surfaces of the broken bone would have given cause for grave anxiety. Moreover, it will, I think, be admitted that a simple puncture with a sharp needle above the pubis must be much less irritating, and much more cleanly, than the trickling of urine over a raw wound in the perineum. The operation, though perhaps from the necessity of repetition more troublesome to the surgeon, is certainly preferable to incision of the perineum in cases where no infiltration of urine has taken place, or where a catheter cannot be passed, or where, having been passed, it sets up too much irritation to allow of its being retained. But though a safe operation, it must not be carelessly or incautiously performed. The site of puncture ought to be carefully determined beforehand, and we ought also to guard against pushing the needle too far, or attempting to empty the viscus completely.

ARTICLE IV.—*Case of Labour complicated with Acute Nephritis and Eclampsia. Twins, Still-born.* By HENRY M. CHURCH, B.Sc., M.D., F.R.C.P.E.

(*Read before the Edinburgh Obstetrical Society*, 23rd *Nov.* 1881.)

MRS A., aged 27 years, states that she has always enjoyed good health, but according to her mother's account she suffered from "fits" for two years, between 15 and 17 years of age, but after scarlet fever at 17, had never any return of them. She came under my care in April 1879, when she was delivered of her first child. Her labour though protracted was natural, recovery rapid. She nursed her child, which died of meningitis with convulsions after a short illness, when ten months old.

Her second labour commenced on 13th February 1881, about a fortnight before the expected time, twenty-three months after her first confinement. For several weeks before she could with difficulty rise from her sofa, on account of great œdema of both legs, which was but little relieved by diuretics or other treatment. She was also troubled with sickness and retching, much more than in the early months of her pregnancy. At what hour labour pains came on I could not ascertain, but there were certainly none for some hours after convulsions took place. I was called to see her on the evening of 13th February, at 9 P.M., shortly after her first fit. She complained then of loss of sight. Thirty grains of chloral were administered, and a sinapism applied to the spine. At 11 P.M. she had a second fit.

February 14*th.*—At 2 A.M. she had a third fit, and at 4 A.M. she had recovered consciousness to some extent, and asked for tea. The convulsions, however, soon recurred with more violence, and at shorter intervals, and with marked opisthonotos. Chloral enemata and inhalation of chloroform seemed to do but little to check their severity or frequency. At 10 A.M. Professor Simpson kindly saw the patient with me, and remained for some hours. At this time she had had fourteen convulsions, and was quite unconscious. As the os uteri was dilating well, the membranes were ruptured and a breech presented. A fibrous band in the perineum prevented the descent, but with the assistance of the fingers the first child was born at 12.30, still-born The convulsions continued. Twelve minims of solution of pilocarpin (gr. ¼) were injected subcutaneously, but though fresh from Duncan, Flockhart, & Co., had little effect in producing diaphoresis. The second child, head presenting, was speedily expelled, also still-born, though the heart pulsations could be felt. They were both fine large male children. Every effort was made in the case of both to promote respiration, but without success. From the lungs of the second child a large quantity of liquor amnii escaped. Uterine contractions took place after a subcutaneous injection of ergotine, and in a few minutes a double placenta was expelled. There was little post-partum hæmorrhage. After delivery six fits occurred, the last about 6.30 P.M. Digitalis fomentations were kept constantly applied to the loins, and at 9 P.M. ¼ grain of bimeconate of morphia was subcutaneously injected. The pulse was then 140, small and irregular; respirations 32. Patient quite unconscious.

15*th February.*—10 A.M. Pulse 120. Temperature 102°. Complete unconsciousness. Pupils sensitive. I drew off 15 oz. of dark, smoky urine, with large quantity of albumen and tube casts. She swallowed a little milk. At 5 P.M. 2 drops of croton oil were administered. At 10 P.M., pulse 108, irregular. Urine drawn off; face more swollen, legs less.

February 16*th.*—10 A.M. Pulse 108, irregular; temperature 101°·2. Patient had perspired freely during the night; skin was now moist. When spoken to aloud she opened her eyes. Bowels had been freely moved from the croton oil. 32 oz. of urine, rather lighter in colour, were drawn off, after which she was not quite so restless. 6 P.M. Pulse 108, stronger; temperature 100°. œdema of face less. Patient is flinging her arms about and saying, "Oh, dear!" She has had a teacupful of milk every two hours. The digitalis fomentations have been constantly continued. She lies mostly upon her back, but attempts to move. Right side moves most, and an attempt is made to draw up the right leg. Discharge natural: 40 oz. of urine were drawn off, clearer than in the morning. At 7 P.M. 30 grains of bromide of potash were given; at 10 nurse drew off urine, and at 11 bowels were freely moved.

February 17*th*, 10 A.M..—Patient when asked puts out her tongue, which is dry and coated. At 1 P.M. (seventy-two hours after delivery) she recognised her husband. Pulse 92, stronger and regular; temperature normal; respiration quiet. She is very restless, and passes water involuntarily. About 32 ounces of urine drawn off. Œdema of face and legs much less. She had taken milk every two hours. 2 drops of croton oil were again administered, and 15 drops of tinct. ferri. perchlor. were ordered to be taken three times a day. Digitalis fomentations still continued. At 6 P.M. pulse 92. Nurse drew off 32 ounces of clear urine. Bowels had been freely moved. Patient recognised me.

February 18*th*, 11.30 A.M.—Pulse 100. Says she feels better, but very sore. Had passed water voluntarily three times, amount of urine during the past twelve hours being 64 ounces. No wetting of the bed. Lies upon her side. There is slight tenderness over the uterus. Vagina syringed with weak Condy's fluid. Belladonna liniment applied to breasts, which are somewhat hard and tender. Urine dark amber colour; no tube casts; albumen less, but numerous epithelial and mucous cells.

February 19*th*.—Pulse 72, irregular. Tongue moist. Says she is better. Urine 108 ounces in twenty-four hours; clearer. Had a good night, but troubled with cough. Legs scarcely pit upon pressure. On account of the irregularity of the pulse, digitalis fomentations were discontinued.

February 20*th*.—It is now one week since her delivery. Pulse 100, regular. Tongue coated, but moist. Urine 65 ounces of light amber colour, *with slight trace* only of albumen. Bowels free. Linseed meal poultices were applied on account of tenderness on right side of uterus. Patient yawns and complains of feeling sore all over the body, and asks about her illness. Breasts not so tender, and as thirst and dryness of throat were complained of, the belladonna application was discontinued. Œdema has quite disappeared. Eyesight is good, but light is still disagreeable.

From this time her recovery was greatly retarded by an attack of acute cystitis; but further notes I need not give, as they have no direct importance in her case as one of puerperal eclampsia. Suffice it to say I feared that the frequent drawing off of the urine had something to do with this attack, and, careful as the nurse was, that I had not sufficiently enforced cleansing and carbolizing of the catheter before use. She, however, completely recovered, and went to the country for several months.

I saw nothing of her after this till the 6th October last, nearly eight months after the confinement recorded, when I was called on account of a threatened miscarriage at the third month. By rest and appropriate means this was warded off, and in ten days she was well and able to be out. On November 14th, rather beyond the fourth month of her pregnancy, I visited her, and regretted to find slight return of the œdema of feet and legs. She was otherwise well. The urine did not contain albumen, but there were a few granular tube casts. I examined her eyes with the ophthalmoscope, and found hyperæmia of the discs, but no retinal hæmorrhagic spots characteristic of chronic Bright's disease. Such is her history so far as it goes.

In this case it is to be noted:—

(1.) The fact of convulsions between 15 and 17 years of age, and of their entire disappearance after scarlet fever at 17.

(2.) That though albuminuria and eclampsia are much more frequent in primiparæ than in multiparæ, in this case these phenomena did not take place till the occurrence of her second pregnancy. That the œdema and albuminuria are to be explained by the mechanical effect of pressure on the ureters and renal veins by the unusually large uterine tumour, of which also the periodic rhythmical contractions would greatly affect the renal circulation during the later months of pregnancy.

(3.) That there was not only a functional albuminuria, but an acute tubal nephritis, which passed off in about a week after delivery.

(4.) That this acute nephritis was probably the cause of the convulsions. The kidney cells being unable to perform their functions, excrementitious matter was retained in the blood, which, acting upon the reflex nerve centres, which would have greatly increased irritability about the time of labour, brought on the convulsions. Probably also the convulsions aggravated the nephritis.

(5.) That convulsions came on before the commencement of labour.

(6.) That the temperature reached 102°, being higher than in a case of ordinary uræmic convulsions, in which it is often lowered.

(7.) That both children were still-born. That this may have been due to the excrementitious matter circulating in the blood, and perhaps to actual convulsions on the part of the children. The circumstance of the large escape of liquor amnii from the lungs of the second child would indicate either a convulsion, or at least a respiratory effort in utero.

(8.) That about the end of the third month of the pregnancy succeeding the one recorded in this paper, there was a threatened miscarriage, though every care was taken by the patient, an effort of nature, as it were, to avoid the further continuance of a pregnancy which, with the appearance now, at the end of the fourth month, of œdema of the feet and a few tube casts in the urine, cannot be watched but with considerable anxiety.

ARTICLE V.—*Some of the Sequelæ of Acute Infectious Diseases in Children.* By JAMES CARMICHAEL, M.D., F.R.C.P., Extra Physician, Royal Hospital for Sick Children, Lecturer on Diseases of Children.

THE pathology of chronic ill-health in children is of much practical interest, and the difficulty of arriving at a correct judgment of individual cases is sometimes very great. In the out-patient room of a children's hospital, the oft-repeated expression of "falling" or "wasting away" is one of the most frequent which the physician hears. A careful physical examination in a large proportion of cases will be sufficient to reveal the presence of some disease. Not unfrequently, however, such exploration fails to throw any light upon the case, and it is only after an attentive consideration of its history, and a more prolonged study, that we can arrive at any definite conclusion as to its nature.

Perhaps the most common causes of chronic ill-health in children are, syphilis, rickets, and scrofula; the two former chiefly commencing in infancy, the last manifesting itself later on in childhood. These I do not propose to consider, but rather to offer a few observations on some of the less frequent, and perhaps in many cases not so generally recognised, causes of ill-health in children after the more common acute infectious diseases. When I say not so generally recognised, I mean as being directly or indirectly induced by, or a sequela of, these diseases.

In the examination of sick children, in hospital practice especially, I always try to impress upon students the necessity of a strict inquiry into the previous history of the case, as likely to give a clue to its elucidation. This is all the more necessary, as among the poorer classes especially, and even in practice generally, there is a tendency, if not to ignore, at all events to regard as trivial, the common acute infectious diseases of childhood. I need hardly say I allude more particularly to scarlatina, measles, and hooping-cough. Of so little importance do mothers consider these maladies, that not unfrequently in the hospital out-patient room I find, in answer to the query, "Has the child ever had any previous illness?" the reply is in the negative, when, to the succeeding question, "Has the child had measles, hooping-cough, or scarlatina?" an affirmative is at once given, thereby impressing one with the idea that mothers consider these diseases of little or no importance in the catalogue of their children's ailments. I therefore always teach the necessity of making careful and specific inquiry as to the previous existence of these diseases.

In obedience to the generally recognised law that organs or functions develop tendencies to disease in direct ratio to their normal or physiological activity, we find that in children the acute diseases are a fruitful cause of initiating chronic disturbance of function or disease in certain organs, or systems, which present great functional activity in the early periods of life. In childhood the function of nutrition in all its parts is unusually active, and also the process of development, and it is by an interference with these functions that the more common acute diseases appear to exercise such serious after-effects in children.

Practically, the most common acute infectious diseases which we have to deal with in children are scarlatina, measles, and hooping-cough. Comparatively few children attain the age of puberty without having been attacked with one or other or all of these complaints, and a certain proportion of those attacked suffer immediately or remotely from chronic ill-health which may or may not be accompanied by some organic affection of internal organs. In these diseases there are certain sequelæ which are considered more or less peculiar to each. I do not intend to enter into a general discussion of these, but to refer to some less frequent, often more remote, and not so generally recognised as directly connected with the disease which has preceded them, possibly by many months, or even years.

General Debility, persisting long after the ordinary period of convalescence, is a condition not unfrequently met with after an attack of measles, scarlatina, or hooping-cough, and this apparently independent of any existing organic disease. The symptoms which characterize this condition are generally those indicating depression of vital power, and interference with the nutritive functions of the body, more or less emaciation, languor, and depression, disinclination to play, want of appetite, and sometimes headache. During convalescence from such diseases, and for some time after, it is our duty to bear in mind the necessity for an observance of proper dietetic and hygienic rules, and the administration of tonics and the adoption of all means tending to restore the bodily functions to a healthy state. In the great majority of cases, under such conditions, all goes on well, and our little patient steadily recovers from the evil effects of the disease. In certain instances, however, such a favourable result does not obtain, and the child may remain weak and "out of health" for a considerable time, and ultimately fall a prey to some other disease, the ravages of which once started, the system, on account of its debilitated state, is unable to resist. General debility must, then, be combated by careful management, in order that the system may be enabled to resist the possible onset of other diseases.

Lymphatic Glandular Affections may be a sequela of any of those diseases which I have referred to.

The disturbance of nutritive tissue function which acute infectious disease produces, naturally tends to affect the lymphatic system, which is so intimately connected—although the exact function of the glands has not yet been determined by physiologists—with nutrition. Through the researches chiefly of Klein, we are now well informed as to the anatomical structure and relations of the lymphatic vessels, and it cannot be doubted, from the close connexion which exists between them and the ultimate tissue elements, that the functions of this system, and of the glands through which the products carried by the vessels pass, are of great importance in nutrition. Recent researches would seem to point to an intimate relation between the ultimate lymphatics and the connective tissue, and the probability that these vessels form a kind of connective-tissue circulatory system. Such being the case, it can hardly be wondered that this system is so frequently affected by acute disease. An appreciation of this fact, and a knowledge of the liability of the lymphatic glands to temporary or permanent disease, gives a key to the pathology and diagnosis of many of the more serious and fatal diseases of childhood.

In a rough way the lymphatic glands may be divided into two classes, those which are situated subcutaneously on the surface of the body, and in the great cavities, in intimate relation to the viscera. It is more particularly to the latter that I desire to refer. The frequent enlargement of the cervical glands after scarlatina is well known. The equally common and not so generally recognised forms of bronchial and mesenteric glandular hyperplasia, following more particularly measles and hooping-cough, are too often overlooked. The cause of this would appear to be the difficulty of making a positive diagnosis in such cases, arising from the total absence of physical signs, and also the length of time which often elapses—it may be months or years—before any evil effects manifest themselves, the true state of the case remaining obscure until a post-mortem examination reveals its exact nature.

Bronchial Glandular Hyperplasia, Bronchial Phthisis.—Whether in all cases of measles where there is much bronchial catarrh, and in most cases of hooping-cough, the lymphatic glands are irritated and enlarged during the acute stage of the disease, returning to their normal size after its disappearance, is still unsettled. The fact that they are enlarged in many cases, and remain permanently so, must, I think, be admitted. During convalescence from measles and hooping-cough it is of extreme importance to keep this fact before us, and also the possibility of ultimate caseous degeneration of the glands, which may lead to a fatal issue by steadily progressive emaciation and exhuastion, or, as more frequently occurs, the production of secondary general tuberculosis, which usually causes death in children by meningitis. In inquiring into the results of autopsies in the Royal Hospital for Sick Children for the last few years, I find it is quite an exceptional thing to meet with cases of tuberculosis in which there did not exist some caseating mass in the lymphatic glands or elsewhere. In a large majority of these cases the bronchial or mesenteric glands were affected, and subsequently to either measles or hooping-cough. Whatever the explanation may be, or what the rationale of its occurrence, or the sequence of events, the fact remains as I have stated, and I cannot help thinking it lends strong support to the correctness of the well-known views of Buhl, Cohnheim, Burdon Sanderson, and others, as opposed to those of Klebs and Villemin, that the infecting substance is formed in the glands themselves, and not from some specific virus developed outside the body altogether. Whether caseating glands in children be one of the chief factors in the production of tuberculosis, as they are certainly of chronic ill-health, the importance of recognising their presence at an early stage cannot be overestimated; and this brings me to say a few words as to the diagnosis more particularly of enlarged bronchial glands. These glands are situated in the posterior mediastinum, in immediate relation to the bifurcation of the trachea and the roots of the lungs. On the surface of the body the site of the former corresponds anteriorly to the first bone of the sternum, posteriorly to the second or third upper dorsal vertebræ. The glands are ten or twelve in number, and lie in the cellular tissue of the posterior mediastinum, in close relation to the trachea and bronchi. It may be at once stated, as a fact generally admitted, that, although considerably enlarged, their recognition by physical exploration is usually attended by negative results. One of our most careful clinical observers of disease in children states, " In order to afford signs of its presence, the disease of the glands must be sufficient to produce considerable enlargement; for unless their size is so much increased as to produce derangement of function in neighbouring organs, the lesion is one which cannot be satisfactorily diagnosed."[1] It may be stated, likewise, with tolerable probability, and my own experience bears this out, that in the larger proportion of all cases met with, and in those in which serious results follow the chronic glandular hyperplasia, the enlargement has not been sufficient to cause injurious pressure on neighbouring structures. If this be the case, the usual signs which are described as denoting the presence of these buboes, such as venous turgidity and lividity of the face and neck, dyspnœa and spasmodic cough, and dulness, either anteriorly over the upper sternal region or posteriorly, will not be present. What have we, then, to guide us in diagnosing this the largest class of cases, in which really no well-marked physical signs exist? In regard to percussion dulness, I have seldom found any marked change in examining the front of the chest over the sternum, but in a certain proportion of cases there has been dulness more or less marked in the interscapular region, immediately on each side of the spines of the upper dorsal vertebræ. Laying physical signs, however, aside, have we nothing to guide us in the general condition of the patient in other respects, and particularly in the *clinical history* of the case? The condition—enlarged bronchial glands—is sometimes known as tuberculization of bronchial glands, or bronchial phthisis. This last term is clinically correct, because one of the chief, and in some cases, I believe, the only sign we have to guide us is steadily progressive emaciation, which cannot otherwise be accounted for. If, along with this increasing emaciation and the absence of signs of organic disease of internal organs, we have the previous history of hooping-cough or measles, the two diseases which above all others are most frequently followed by bronchial glandular hyperplasia, our diagnosis will be pretty well assured. In general terms, it may be stated that, given a child who has suffered within a year or eighteen months previously from either of those diseases, and who is in a chronic state of ill-health and undergoing progressive wasting with no symptoms of disease of any internal organ, the probable existence of bronchial phthisis, more rarely of mesenteric phthisis, may be suspected. In illustration, I extract from the record of a case, one of many similar which I possess, a few particulars. Alex. M'D., æt. 2½, was brought to the Royal Hospital for Sick Children on 8th February 1881, suffering chiefly from debility and wasting. The mother stated he was a healthy child till he was attacked by measles a year ago, since which he has never been quite well. He was a breast baby. There were no marks nor history of syphilis. On examination all organs yielded negative results as to signs of disease. There was nothing positive in regard to the child's condition but progressive emaciation. He was under careful observation for five months, and the course of the case was watched with interest by the gentlemen attending the out-door clinic. I ventured to express an opinion, many weeks before the child died, based upon the general history of the case, and its negative clinical features, but more particularly on account of the antecedent history of measles, that subsequent to this disease, and as a direct result of it, bronchial glandular hyperplasia had been established, followed by caseation of the glands, and that probably general tuberculosis would follow, or was then actually existent. The subsequent history of the case amply verified such a diagnosis, the child succumbing to meningitis a few weeks after. On post-mortem examination, the tracheo-bronchial lymphatic glands were enlarged and caseous, the lungs, liver, and other organs studded with small, gelatinous-looking, so-called miliary tubercles, and the brain presented all the usual characters of meningitis. This is a very ordinary history, as the records of our hospital testify. Measles is, I believe, the most common predisposing cause of this sequence of events. Hooping-cough also, as might be shown by bringing forward cases, causes a similar train of clinical features. I relate briefly one case in illustration.

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[1] Eustace Smith on *Wasting Diseases*, p. 261.

Marion C., æt. 3 years 8 months, was brought to hospital on

10th August 1880. She was a healthy child, and never suffered from any illness until six months ago, when she was attacked with pertussis, which lasted for four months. Since then she has been quite free from cough, but her general health has not been satisfactory. On examination she was not an unhealthy-looking child, being fairly well nourished. She was, however, languid and listless, had little appetite for food, the bowels were irregular, the muscular system was soft and flabby. Ordered emulsion of cod liver oil, regulation of diet, and change of air if possible. On the 13th inst., or three days after examination, she began to be troubled with vomiting coming on at irregular intervals without reference to the ingestion of food. On the 15th inst. drowsiness supervened, and she sank rapidly from meningitis. On post-mortem examination, the brain presented all the usual signs of basic meningitis and general subarachnoid effusion. The ventricles contained about six ounces of fluid. The lungs, liver, kidneys, and peritoneum were studded with tubercles. Broncho-tracheal glands enlarged and caseous. The frequent occurrence of such a train of events as this following measles and hooping-cough is a clinical fact of very great importance, and its realization ought to make the physician more than ever careful to watch the progress of children who have suffered from these diseases for many months, even years, after the attack. Any deviation from the normal standard of health should be carefully inquired into and treated. It is of special importance, after all these acute infectious diseases, to attend to the dieting and general hygienic condition of children, more particularly, I think, to the digestive functions, and to administer such remedies as cod-liver oil, hypophosphites, or iodides. As a matter of routine, I am now in the habit of ordering these remedies to be continued for months after recovery from these affections, when there is any delay in convalescence or a return to healthy bodily function and the natural standard of health.

Mesenteric Glandular Hyperplasia, Mesenteric Phthisis.—This disease, although long considered to be almost solely the outcome of the scrofulous constitution, not unfrequently, although more rarely than the bronchial variety, attacks previously healthy children who have suffered from acute infectious disease. I have met with it after measles and scarlatina or typhoid fever. It may also occur independently of all these conditions in carelessly fed children who have frequently had gastro-intestinal dyspepsia, or catarrh, or chronic diarrhœa. Well-marked examples of tabes mesenterica—and by these I mean cases where there is general enlargement of the glands, without any other special local affection, in fact, where the mesenteric disease is the really active and prominent condition from which the child suffers—are, comparatively speaking, rare. Slight enlargement of the glands is not by any means an uncommon occurrence in cases of general tuberculosis. The diagnosis of this condition is not always easy, though perhaps hardly so obscure as the bronchial variety. The situation of the glands enables us to feel them more readily, and the oft emaciated state of the child, and the retracted condition of the abdominal parietes lends additional facilities to diagnosis. There cannot be said to exist any special symptoms of this affection. The state of the digestive system is seldom natural, but not usually characteristic. We may either have constipation or diarrhœa, or an alternation of these. If the glands cannot be distinctly felt, we must arrive at our diagnosis very much in the way we are constrained to do in the bronchial variety, judging by the history of the case and the general state of nutrition. With reference to the diagnosis of mesenteric and bronchial phthisis and their association with general tuberculosis, I have made no allusion to the temperature, for I am convinced, from careful observations I have made now in a large number of cases, that the thermometer is a most unreliable guide to the presence of tubercle, *per se*, in the lymphatic glands or elsewhere. My observations on this point lead me to the conclusion that the actual existence of tubercle in organs, so long as there is no concomitant inflammatory action going on, does not cause any rise of temperature, the fact being that tubercles may exist in the lungs, liver, or elsewhere, for a long time without producing any irritation.

Nasal Catarrh is a frequent sequela of measles and scarlatina, but often thought little of and left untreated. In my experience it is sometimes attended by ulterior serious consequences, and even the milder forms of the disease cause much inconvenience and keep the child in an irritable state, and may seriously interfere with sleep and feeding. It is our duty, I submit, to treat such conditions by suitable local as well as constitutional means, even in the milder cases. In its simplest form the nasal mucous membrane is red and irritable, secreting freely, and the discharge, escaping anteriorly, often gives rise to an eczematous or herpetic eruption on the upper lip. The child is generally debilitated and feverish, and restless during sleep. Such cases yield readily to proper feeding and tonics, along with such applications as vaselin and lead ointment to anterior nares, or, if necessary, brushing with a solution of nitrate of silver. In the more severe forms of nasal catarrh you have increased inflammation and thickening of the mucous membrane of the anterior nares, often accompanied by superficial ulceration. When this condition is allowed to run its course, not unfrequently the anterior nares become nearly occluded, so that respiration is greatly interfered with.

The most aggravated case of this kind I have treated was that of a little girl, Marion M., aged three years, who was brought to the hospital with the history that her nose had been running ever since she had measles, six months previously. On examining the openings of the anterior nares, the mucous membrane and sub-mucous tissues were much infiltrated, and the orifices only admitted a surgical probe with difficulty. The child was thin and miserable-looking and of scrofulous diathesis. Its appetite was bad, and sleep much interfered with. Under suitable local and constitutional treatment the structural condition of the anterior nasal orifices was entirely remedied. A more serious consequence of nasal catarrh is ulceration of the middle nares, with or without caries of the turbinated bones or vomer. This is more rarely met with, and generally occurs in strumous or syphilitic children, constituting true ozæna.

Gastro-Intestinal Affections.—Both scarlatina and measles may develop, during convalescence, different kinds of gastro-intestinal disorder. The follicular enteritis, following scarlatina more frequently than measles, is a well-known and dangerous complication. This condition, however, is generally well recognised, and I do not enter upon it.

Atonic Gastro-Intestinal Dyspepsia is not unfrequently met with, and is apt to persist for a considerable time, after both measles and scarlatina. The general symptoms are loss of appetite, usually thirst, tendency to nausea or vomiting after food, and not unfrequently diarrhœa, sometimes of a lienteric character. The child is thin, pallid, and at times feverish. There is generally, however, an absence of pyrexia of a continued character, and not unfrequently the temperature tends to be subnormal. The tongue in colour is either normal or slightly paler than natural, and deficient in epithelial covering. This condition is sometimes very intractable, and prolongs the period of debility during convalescence indefinitely. It requires very careful dieting, and the administration of food in small quantities at a time, and of a light, digestible nature, with small doses of arsenic, which acts often like a charm in restoring the tone of the stomach. Nux vomica is also of service, more especially in the intestinal variety, and when there is a tendency to lienteric diarrhœa. Another variety of dyspepsia, and one which has been dignified by the name of "mucous disease" by Dr Eustace Smith, is met with most frequently after hooping-cough. A perusal of Dr Smith's monograph on the subject well deserves attention. He describes, in his usual graphic manner, the clinical features of the aggravated form of this condition. It is characterized by languor, depression, disinclination to play, restlessness during sleep, and sometimes fits of "night terrors." The appetite is very capricious, there is generally constipation, alternating at intervals with irritation and looseness of the bowels. The tongue is flabby, clean, or slightly furred, with prominence of the papillæ, more particularly the fungiform, and usually covered with excess of mucus, giving it a glossy or varnished appearance. The stools are generally costive, and contain a quantity of mucus. Alternating with this condition you have recurrent attacks of vomiting and diarrhœa, after which the child is often much relieved for a time, only to relapse after a certain period into its former condition. The disease is rarely seen in infants, but usually in children above the age of four. The treatment so carefully laid down by Dr Smith I have found generally successful. It is chiefly dietetic, and must be conducted on the principle of abstinence from saccharine and starchy kinds of food, as well as most kinds of vegetables, restricting the child chiefly to milk and bread, eggs raw or lightly cooked, meat soups, and meat. This condition is also associated with a harsh and dry state of the skin, and gradual and progressive emaciation characterizes the severe forms of the disease. Although the appetite is often good, sometimes voracious the food is not properly digested, and causes flatulence, colic, and restlessness during sleep. Many of the well-marked and severe cases of this affection which have come under my observation have been associated with or followed by lymphatic glandular hyperplasia and caseation ending in general tuberculosis.

Cutaneous Eruptions are very frequent as a remote result of acute infectious diseases and more particularly of measles. In hospital and dispensary practice the most frequent are the chronic pustular affections, ecthyma and impetigo, the former affecting the lower half of the trunk and legs, more rarely also the arms, the latter attacking the head. Both forms generally yield in due course to careful dietetic and tonic treatment, preceded by administration of stomachic medicine if there be any digestive derangement.

I regret that the limits of a short paper have prevented me from entering with more minuteness into a description of these sequelæ. My object has rather been, while describing leading features, to point out the probability of their intimate connexion with the diseases which have preceded them, and the necessity of the very careful management and treatment of children during convalescence and for some time after having suffered from any of these more common acute infectious maladies.

ARTICLE VI.—*The Causation of the Movements of the Head at the Brim of the Rickety Pelvis; with Illustrative Cases and some Remarks on Treatment.* By D. BERRY HART, M.D., F.R.C.P.E., Assistant to the Professor of Midwifery in the University of Edinburgh.

(*Read before the Edinburgh Obstetrical Society, 13th June* 1881.)

WHILE a special knowledge of the mechanism of labour in ordinary cases is of the greatest importance to the practitioner, such knowledge becomes imperatively necessary for proper treatment when the pelvis is deformed. It would indeed be profitable, though tedious, to compare, step by step, the wordy warfare that has raged for so many years in regard to the cases suitable for forceps and turning, with the gradual growth of our knowledge of the mechanism of labour in deformed pelves; and to observe how, gradually as the latter increased, the din of words waxed more faint, until unanimity almost has finally prevailed on what was one of the most moot points in obstetrical practice.

To-night, however, I purpose simply considering the mechanism of labour in the pelvis known as the rickety, premising that I deal only with cases where, either spontaneously or by proper treatment, a living child can be extracted.

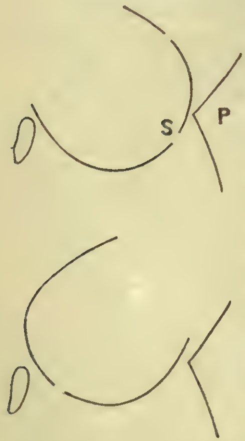
At the brim of the rickety pelvis the child's head presents, at the beginning of labour, in a manner strikingly opposed to that in the normal pelvis. It lies with its antero-posterior diameter in the transverse of the pelvis, with its anterior and posterior fontanelles on a level, or nearly so, and with the sagittal suture running transversely near the promontory, much more rarely near the symphysis. The biparietal diameter of the head, or one slightly in front of it, lies in the conjugate of the brim. From this it can be readily understood that, at the beginning of labour, a parietal bone of the child's head presents. Now, as the parietal bones are lateral *quâ* the child's head, we find the German nomenclature a very convenient one. When the sagittal suture is near the promontory, then the anterior parietal bone (anterior *quâ* the pelvis) presents; while, when the sagittal suture runs near the symphysis, the posterior parietal bone (posterior *quâ* the pelvis) presents. We can thus speak of

I. The anterior-parietal-bone presentation. (Fig. 1.)

II. The posterior-parietal-bone presentation. (Fig. 2.)

In each of these we may have two varieties, according to whether the occiput is left or right, but in what proportions is not well known. One or two points, however, must be added. The anterior-parietal-bone presentation is by far the most common. The posterior-parietal-bone presentation is very rare. These two facts are prominent. Litzmann and Veit have more especially called attention to the posterior-parietal-bone presentation. The interest in their papers lies in the fact that this posterior-parietal-bone presentation may occur in a normal pelvis, will then cause delay in the labour, and, as Veit has noted, may lead to undue elongation of the cervix on its posterior aspect.

FIGS. 1 and 2.



The upper figure is the anterior-parietal-bone presentation, the lower the posterior-parietal-bone presentation, both in sagittal mesial section.
S, Sagittal suture.
P, Promontory.

To sum up, then, in the rickety pelvis the head most usually presents with the sagittal suture near the promontory, *i.e.*, presents the anterior-parietal. The posterior-parietal rarely presents, and in a rickety pelvis does not, *per se*, add to the difficulty of the labour. All this may be put more technically by saying that at the brim of the rickety pelvis the head has neither the Solayres nor Roederer obliquities, but possesses the Naegele obliquity much exaggerated.

After the onset of labour quite a unique series of head movements occurs. Authors such as Goodell, Litzmann, Lahs, Kleinwächter, Schrœder, vary in their description—a matter of no wonder, considering the difficulty of clinically observing these accurately. So far as my experience and reading go, the following is the most accurate account.

In the anterior-parietal-bone presentation the forehead dips slightly or markedly, causing the Michaelis obliquity, as Dr A. R. Simpson has aptly termed it. The sagittal suture leaves the promontory and approaches the centre of the pelvic brim, *i.e.*, the posterior side of the head, which is above the plane of the brim, rounds the promontory, and the head as a whole becomes shoved to that side of the pelvis towards which the occiput lies. Thus the head passes the conjugate by its bitemporal diameter, or one slightly behind it.

In the posterior-parietal-bone presentation the forehead dips, the side of the head above the plane of the brim rounds the symphysis, and the head as a whole becomes shoved to the side of the pelvis towards which the occiput lies. I have never been able to trace a case of mechanism in the posterior-parietal-bone presentation, but there is indubitable evidence that the head rounds the symphysis, since Litzmann, who first drew special attention to it, described three grades, viz., one where the sagittal suture is above the symphysis, one where it is near it, and one where it lies near the centre of the pelvis. Of course, as Veit has said, these are just the stages of the rounding of the symphysis. Some authors have described the sagittal suture not only as leaving the promontory, but as returning slightly to it; *i.e.*, the head as rounding the promontory and the symphysis too. Thus Goodell says, "Later on, it (the sagittal suture) begins to return towards the sacrum" (p. 780, line 3). More recently Matthews Duncan has confirmed this in some experiments where, by traction on the foot of fœtuses brought head last through pelves with contracted conjugates, he was able to demonstrate that a double rotation occurred. Dr Duncan also gives a summary of the various descriptions of the head mechanism in a rickety pelvis, exhibiting the discrepancies already alluded to.

In the last place, Goodell alleges that after the head has been shoved to the occipital side of the pelvis it meets with resistance from the side-wall of the pelvis, and becomes slightly pushed to the forehead side of the pelvis. So far, our knowledge of the movements is as yet fairly accurate.

The explanation of the presentation and head movements is now best taken up under three heads—

I. The parietal bone presentation.

II. The dipping of the forehead and shoving of the head as a whole to the occipital side of the pelvis.

III. The rounding of the promontory.

I.—*The Parietal-Bone Presentation.*

This results from the shape of the head and the conjugate contraction. The mobile head cannot enter the brim, but lies on the promontory and symphysis in stable equilibrium, *i.e.*, with the Naegele obliquity. This is the only position in which it finds stability.

II.—*The Dipping of the Forehead.*

In order to understand this, some preliminary matter is necessary. As the waters are always more or less gone, we have to consider how the fœtus is driven on by the uterine and abdominal powers. It is best to take a simple instance first. Let us suppose the fœtal head in the right occipito-anterior position and non-rotated, as Braune's plate shows. Part of the head is exposed in the vagina, part is in contact with the elastic tissue lining the pelvis. Here the head meets with resistance to its onward progress, *i.e.*, so much of the pelvic tissue grips and resists its transit. It marks out on the head a girdle which we may call the girdle of resistance. We may define this girdle more accurately, as Lahs has done, by drawing tangents to the head, beginning below at the lowest limits of the contact of head and pelvis. Where the tangents leave the head above gives us the upper limit of the girdle of resistance. The plane section of the head whose outer limits are the girdle of resistance, is the plane of the girdle of resistance. Uterine action, leaving out the consideration of the abdominal powers, compresses the fœtus, and as the result of this we get so much fluid pressure over the plane of the girdle of contact, and at right angles to it. The fœtus is considered as a plastic fluid, conducting force, equal in all directions. All above the plane of the girdle of contact conducts pressure, while all below the girdle of contact is driven on and passes down in a path determined by the perpendicular fluid pressure on the plane of the girdle of contact, by the shape of the head and its tenacity, and the friction of the pelvic walls.

Thus, in an ordinary labour, the fœtus is a compact ovoid, and by uterine action has a uniform tension established in it. So much of this tension is distributed equally over the plane of the girdle of contact, and drives on the part of the head lying below its upper limits.

Now, how about the head at the brim of the rickety pelvis?

We have not at first the compact ovoid, but an approach to it. Uterine action moulds the tissues over the sternum closely against the chin, the posterior shoulder touches the side of the head lying above the brim, and thus ultimately we get a compact ovoid, as in the ordinary case alluded to. If we now draw tangents to the head touching the symphysis and promontory, we define the girdle of resistance, and thus get uterine action establishing a uniform tension over the plane of the girdle of contact. The head tends to be forced down as a whole; but as the superficial area of the plane of the girdle of resistance on the forehead side of the line joining the symphysis and promontory is greater than that on the occipital side, we get the forehead descending—dipping, not extending, as that involves the separation of chin and sternum. After the forehead has thus dipped it becomes arrested at some point below the plane of the brim. The plane of the girdle of resistance thus cuts the pelvic brim, and the tension acting at right angles to this oblique plane drives the head as a whole to that side of the pelvis towards which the occiput lies.

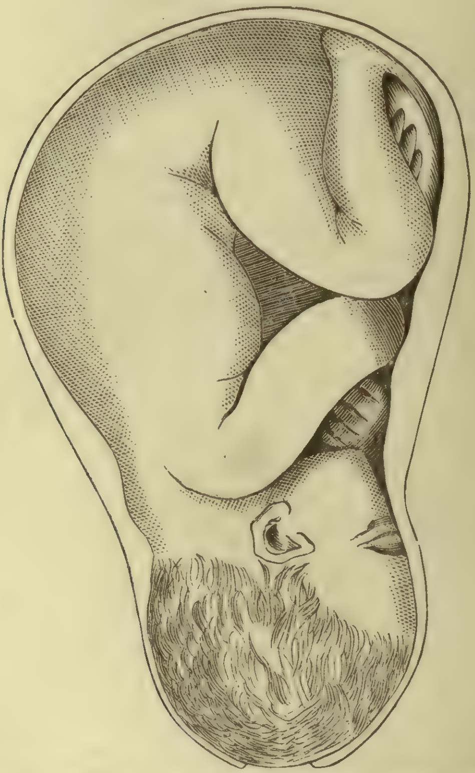
The head always delays considerably at the brim—a delay due to the amount of conjugate contraction, but also, I believe, to this fact: The fœtus, at first not thoroughly compact, does not transmit uterine action effectively over the forehead side of the plane of the girdle of resistance. While the uterus is thus moulding the fœtus, time is lost, and thus the dangerous elongation of the cervix occurs. This seems to me to help to explain why Litzmann's posterior-parietal presentation should cause delay in a normal pelvis.

III.—*The Rounding of the Promontory.*

Of this no explanation seems to me so good as that given by Lahs. His tangents, drawn with the head at the brim, show the steeper side of the head to be the one with the sagittal suture near the symphysis or promontory. With uniform tension over the plane of the girdle of resistance this steeper side slips down first, *i.e.*, the head rounds the promontory or symphysis, as the case may be. It may be urged that Duncan's experiments tend to disprove this view, seeing this rounding occurred, in his experiments, when the head came last with its sides symmetrical, *i.e.*, equally steep. I do not think so, however. I can quite understand in these experiments that the posterior side of the head, after rounding and becoming indented by the promontory, may have resisted this more, and the anterior side then rounded the symphysis slightly. Dr Champneys' remarks on Dr Duncan's paper as to this point are valuable. He falls into error, however, when he speaks of the posterior surface of the symphysis in relation to the head mechanism. The head rests on the upper margin of the pubis. The posterior surface of the pubis shelves forward, and does not come into relation with the head until the head is in the pelvis. (Fig 1.)

The usual explanation of the onward advance of the head after the membranes are ruptured is, that the uterine force is conducted exclusively through the spine, and thus, from its articulation with the occiput, the latter is pushed down in advance. No one has yet, however, told us why the uterine force should prefer the spine to any other fœtal route. The spine conduction is based on the idea that because the occiput usually descends first in ordinary pelves, therefore it is shoved down by the fœtal spine articulated near it. Further, the spine theory ignores the compactness of the fœtus and the close apposition of the chin to the sternum, so well shown in Braune's plate. Recently, Labat has published a diagram of the uterus and fœtus in a woman who died during labour from eclampsia. There the spine is so curved that the conduction of the uterine force along it to the occiput is an impossibility. The spine theory, however, utterly fails when applied to the explanation of the movements of the head at the brim of the rickety pelvis, so utterly that I need not waste time in refuting it. (Fig. 3.)

FIG. 3.



Fœtus in utero, seen from front, from a woman who died during labour (Labat). Note curve of body.

The cases of rickety pelvis I have seen are twelve in number. Two of them were in Dr A. R. Simpson's consulting practice, two were seen with Dr Ronaldson, and the rest were in dispensary practice. In all, the conjugate varied from 3 to 3¼ inches, whilst in one it was 2½. One was a face presentation, two were the rare posterior-parietal-bone presentations, and the rest were anterior-parietal presentations. In all of them turning was employed. No mother was lost: one child was still-born, in one I had to perforate behind the ear, in another Dr Simpson perforated for prolapse of funis, whilst in the rest living and thriving children were obtained. In two of the cases where living children were obtained, all the previous children had been delivered still-born by forceps, and in one case Dr Simpson extracted a living child by turning where a previous labour had been terminated by craniotomy. Four of the children had the vertical spoon furrow in front of the ear. In the case I had to perforate after turning, the posterior side of the head was indented just below the parietal eminence, showing transverse contraction at the brim.

In regard to the method of turning employed in such cases, it requires to be the bipolar, of course. It is better to have skilled assistance, and to be careful as to the following points:—After the head has been pushed away from the brim, and the breech depressed, care should be taken to manipulate the head up to the fundus before any traction is made. After both legs have been secured, the traction made should be very slight. The important thing is to push the fœtus down vigorously, and thus keep the arms down. This saves time, as delay in bringing down the arms may prove fatal to the child's life. In the extraction of the head the following method should be employed:—The child's head lying transverse in the brim, the body is carried over the symphysis as far as it will go, and moderate traction kept up. Then, with the woman in the dorsal posture, and the assistant kneeling on the bed at her side, pressure is made on the head with both hands, and in the axis of the brim. The pressure is not to be moderate. In all the cases I have driven the head through with all the force I could exert, and have never seen any harm ensue. When the head is thus forced into the pelvic cavity, the fœtus should be swung to the perineum, and then the head can be rapidly extracted in the ordinary way, viz., by two fingers in the mouth and two below the occipital protuberance. The most important thing is the downward pushing of the fœtus and the propulsion of the head suprapubically. I have thus followed Goodell's teaching thoroughly, except that I use suprapubic pressure earlier, and employ very little traction.

In the last place, I have now to consider and summarize the lines, based on mechanism, to be laid down as to the treatment of arrested head at the brim. In order to make this complete, and to take advantage of the important literature found, I am glad to say, in our own Transactions, I shall take up the question in its wide sense. Given a head arrested at the brim, how is the practitioner to treat his case intelligently and safely? We all know the routine advice—Put on the forceps; if that fails, try to turn; and if this fails, then perforate. Cases are recorded where all this has been followed by Cæsarean section. It is better, however, to differentiate the cases as follows:—In the first place, chloroform the patient and palpate the head suprapubically. Note the relation of the uterus and cervix. By all means examine the head bimanually, *i.e.*, with two fingers in the vagina and hand above pubis. So far we learn if the head lies above the brim or is arrested while passing, if the cervix is elongating dangerously, or if the head is hydrocephalic. Then pass the hand into the vagina, and note the mechanism. If the head is transverse at the brim, note how the sagittal suture lies, and the relation of the fontanelles. If the sagittal suture is transverse and near the sacrum or symphysis, and if both fontanelles are easily touched, then there is in all probability conjugate contraction. Next measure the conjugate and feel the space between the forehead and iliac margin of the brim, and the occiput and its corresponding margin. By this we learn the relation of the head to the aperture, viz., the brim, through which it has to pass.

Now, I. If the head is presenting a parietal bone, then forceps is certainly contra-indicated, and turning proper. But it may be said, How can one tell if the head will come through by turning alone? The following points will help in this:—

(1.) The conjugata vera should not be less than $2\frac{3}{4}$ inches. A living child will rarely be brought through a conjugate of $2\frac{1}{2}$ inches.

(2.) If the forehead is dipping well, or if both fontanelles are on a level, and some little space felt in the transverse diameter on the side of the forehead and occiput, and if the conjugate is above $2\frac{3}{4}$ inches, then turning should bring through a living child.

(3.) If, however, the fontanelles are not level, *i.e.*, if the anterior fontanelle is higher than the posterior, while the parietal bone presents, then turning will probably fail, as this mechanism shows transverse diminution at the brim too; cranioclasm is indicated.

II. If the occiput dips, and the anterior fontanelle is high, and the sagittal suture in an oblique diameter, then, as the pelvis is justo-minor or obliquely contracted, *cæteris paribus*, the treatment should be forceps or cranioclasm, not turning. The limit of forceps in justo-minor pelvis is not well known.

But, it may be urged, what about cases where the head is impacted and turning impossible or dangerous, as the case has not been seen early enough? The practitioner should keep in mind the value of suprapubic propulsion or the lever. Is it not the case that we turn in rickety pelves simply to push the head vigorously through the brim? The day may come when we shall push the head through the rickety pelvis without turning first.

Lastly, in the rickety pelvis, if the lever be applied over the parietal bone not presenting, it follows from what has gone before that the natural mechanism can be easily imitated and the head dislodged when impacted, or before this.

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ARTICLE VII.—*Address to the Royal Medical Society of Edinburgh.* By ALEXANDER DICKSON, M.D., LL.D., Professor of Botany in the University of Edinburgh. Delivered 4th November 1881.

GENTLEMEN,—In acceding to the request of our presidents, that I should address the society on the opening of this session, I did so on the condition that I must be excused from any elaborate discourse. The time given me for reflection was exceedingly limited, and has been much broken up by the examination for medical degrees; an ordeal which, however trying it may be to the candidates, or, at least, to some of them, is hardly less so to the examiners.

Much as I regret, and as you in the course of the evening may have to regret, the shortness of time at my disposal, I still more regret that unavoidable engagements have prevented my colleague, Dr Rutherford, from addressing you to-night, as was the original desire of our presidents. From him you could not have had other than an admirable address; and, from his more immediate connection with the practical matters which chiefly engage your attention, he is in all respects more fitted than I am to address you on such an occasion.

Since I had the honour of being one of the presidents of the society, fully twenty years ago, many things have happened ; and, I am glad to say, our society has not stood still. The "Royal Medical" in a remarkable degree exhibits the phenomena of organic vitality. For example, there is the flux of material, the form remaining the same while the component particles are always changing ; some passing off, others taking their place ; the freshness and vigour of the organisation being maintained by constant infusion of new blood. In following out this simile it may be supposed that old members like myself must play the part of effete particles, but we may take heart of grace when we consider the circulation ever going on in nature, whereby the old material has always the chance, at least, of being worked up into fresh combinations. Among the changes which have occurred since I was officially connected with the society there are two to which I should wish to draw your attention for a little. The first is the practice which has prevailed of recent years (and in accordance with which I am here this evening), of having the session opened by an address from some old member of the society. With regard to this I cannot but think that the proper person to perform the duty is the senior president of the society,—that on such an occasion he is the right man in the right place. There is, no doubt, advantage in bringing together, as much as possible, the older and younger members of the society, and it is only proper that the old members should continue to evince an interest in the Institution to which they have all owed so much ; but it may be open to question whether the delivery of opening addresses is the best way in which old members can testify their attachment and gratitude to the society. The occasional lectures on special subjects from those specially qualified, which in former times were wont to be given, seem to me to be of vastly greater importance than opening addresses, which, as being, so to speak, made to order, almost necessarily lack the freshness of spontaneity, almost necessarily are "stale, flat, and unprofitable."

The other organic change in the society to which I would advert is that relating to attendance at the society's meetings. As some of you may remember, the attendance of ordinary members at the public and private business of the society was till lately obligatory, absence being punishable by fines ; and, in the event of non-payment, the offender laid himself open either to proceedings for recovery or to the more serious fate of expulsion. Within the last few years the idea arose that these regulations were burdensome ; and it was even alleged that attendance at the society every Friday evening during two winter sessions involved a greater expenditure of time than the student could afford ; and, further, it was stated that such regulations acted as deterrents to many who would otherwise seek admission to the society. To a certain extent there may have been truth in some of these allegations. At the same time I would have you keep a jealous watch over the working of the change which has been effected. Above all, I would ask you to bear in mind the prime object of the society, viz., the mutual encouragement of its members in their common pursuits. It may happen that a dissertation is uninteresting, or is not handled by its author in the most instructive manner; yet it is clear that one member requires as much support, sympathy, and encouragement as another. It is nearly certain that all dissertations will not be of equal importance, or all authors of equal ability; and it is just the support I have mentioned which may sometimes be wanting, in the absence of any rules enforcing attendance of members.

With regard to the supposed waste of time at the society's meetings, I would take this opportunity of impressing upon you that every moment away from your books is not necessarily misspent—that, on the contrary, a few moments spared from them may often be of very great advantage. Not that I undervalue study; but too much of that may defeat its own object, and, as we all know, make a "dull boy."

Many students of the present day seem to be ever haunted by the idea of their examinations, and to look upon their studies more as steps towards the examination-hall than as the commencement of what is to be pursued throughout life. Examinations, although indispensable, are undoubtedly attended by very serious drawbacks, and not the least of these is their tendency to foster a mechanical mode of study, which is technically termed "cramming." This is one of the evils which, with the progress of the times, seems to be increasing, rather than diminishing; and it has even led to the question whether some other than the examination test of fitness might not be preferable. The most direct and radical cure of the evil would, of course, be to abolish degrees and other qualifications, and, while encouraging education to the utmost, permit absolute free-trade in the practice of the profession, in the expectation of each would-be practitioner finding his own level by a natural process. Instead of the test of *examination*, you would have that of "*natural selection*."

As to this it may be said that if the public were capable of discriminating between the fit and the unfit there would be no need for any legalised guarantee of fitness. Inasmuch, however, as the public is eminently incapable of such discrimination it requires to be protected against itself. No doubt, under a free-trade system the incompetent practitioners would, for the most part, be weeded out—"plucked," in fact—by natural selection; but, as this process is a gradual one, necessarily extending over a considerable time, many valuable human lives might be sacrificed in the interval.

The evils attendant upon the examination system are, as I have said, increasing rather than diminishing. The student seems, year by year, more and more oppressed by care; and, in failure of the radical cure just alluded to, it behoves us to look about for at least some possible alleviation. In my time the student may not have "got up" nearly so many things as he does now, but there was, I fancy, less of what may be called mental indigestion. In those days the system of "cram" was hardly beyond its infancy, and "crammers" used to be resorted to only by the more hopeless class of students. Nowadays, I am afraid, there are many, even of good students, who consider it no disgrace to lay themselves under the grindstone. As I understand it, "cramming" is a system whereby the student is mechanically stimulated to remember the greatest possible number of things—chiefly vocabular—with the least possible expenditure of intellectual effort. Under such a system, it is sometimes wonderful to observe the amount that will glibly and even accurately flow from a candidate's pen or tongue, when, perhaps in the next sentence, he may horrify and astonish you with something indicating a total want of comprehension of what he has been treating you to. It is often alleged that the examinations are becoming more difficult than they were formerly, and that undue pressure is put upon the examinees. No doubt, all the branches of medical study are becoming more and more developed; but if in any cases the examinations are disproportionately increased in severity this probably results from the perfection to which this system of "cram" has attained, and which renders it sometimes a matter of difficulty to distinguish between mere "rote" and actual intelligence. All this is much to be deplored, but it is easier to point to the difficulty than to suggest the precise remedy. To abolish crammers would require legislation of too drastic a character; and, moreover, would interfere with the constitutional liberties of many who may be excellent citizens, notwithstanding the enormities of their system. Another remedy may be found in making the examinations as practical as possible; making them such that mere mnemonics without intelligence will not avail. The most effectual remedy, however, lies with the student himself. Let him look to his studies for their own sake, and the examinations will take care of themselves. Let him take a real interest in his work, and the horrors of examination, which so often weigh upon him like a nightmare, will vanish. Towards this desirable end there is nothing more conducive than the frequent intercourse of students with one another; sharpening their wits by mutual contact, discussing together their common subjects of study, and thereby gaining more real insight than can be acquired by long and weary toil under the system of "cram." Such mutual encouragement and edification are to be found in an eminent degree within the walls of such an institution as this society.

ON SOME OF THE RELATIONS OF THE PRESENT STATE OF THE LAW TO MEDICAL SCIENCE AND TO PUBLIC HEALTH.

Leaving the consideration of our internal affairs, I propose now briefly to direct your attention to certain Acts of Parliament relating to questions which very closely concern the progress of medical science and the furtherance of public health, which at the present time appear to claim special attention, and with regard to which it is of importance that the members of this society who are about to enter or have just entered the ranks of the profession should form sound opinions.

The first of these Acts to which I shall advert is that generally known as the Vivisection Act, "An Act to Amend the Law relating to Cruelty to Animals." This, as you all know, deals with the regulation of the performance of experiments on living animals. Some years ago a violent agitation with regard to the alleged wantonness and cruelty of such experiments was got up by a section of the community—really, I believe, a small section, but one possessed by a spirit of earnest though ignorant and fanatical enthusiasm, and sufficiently clamourous to impose upon our legislators, and even upon some eminent men of science, the idea that the noise made was that of a great popular tide which it was impossible to resist. It was supposed by the faint-hearted friends of science that it were better to yield *so* far to the agitation—that the physiologists had better bend a little before the storm, to avoid being broken by it. It was merely the familiar cry which one hears in connection with agitations of many other kinds, "*Accommodate yourself to this, or yield to that*" (no matter how much your sense of right and wrong be outraged), "*lest a worse thing befall you.*" The result of this combination of the Philistine agitation of the enemies of science with the worse than foolish timidity of many of its friends has been the passing of a statute which, even during the few years it has been in operation, has incalculably retarded the progress of medical science in this country. In order that you may appreciate the working of this Act, I shall briefly state its main provisions. These are :—

(1.) The experimenter must have a general license from one of Her Majesty's Principal Secretaries of State, allowing experiments, provided they are painless, are not used for lecture illustration, and are not used for the acquisition of manual skill.

(2.) If the experiments are painful, or are to be used for lecture illustration, then special certificates as to their importance from certain authorities are in addition required, and the Secretary of State has further the power of disallowing these certificates. The authorities qualified to sign such certificates are the Presidents of the Royal Societies, the Royal Irish Academy, the Royal Colleges, the Glasgow Faculty, and the General Medical Council.

(3.) If painful experiments are to be performed on cats, dogs, horses, asses, or mules, then the special certificates as to the importance of the experiments must further state that no other animal can be used.

About a fortnight is generally consumed in the disposal of an application for a special certificate.

(4.) A report has to be given in at the end of the year, as to the number of experiments performed, and their general result.

I have not entered into the many vexatious and absurd minutiæ in which the Act abounds, but from what I have said you will see that, even in the most favourable circumstances, the scientific investigator is hampered and embarrassed, and the progress of his work delayed, by the restrictions under which he is placed. More than this, important researches in various quarters have been disallowed, and such occurrences are becoming more and more frequent. Not only have medical men in various towns been refused the general license, but special certificates from the prescribed authorities have been disallowed, on the ground that the Secretary of State did not see the use of the proposed experiments! This would be ludicrous, were it not, in reality, so melancholy.

It was only very lately that my colleague the Professor of Materia Medica was at first actually refused, and only afterwards with difficulty obtained recognition of a certificate for the performance of a series of experiments on an important poisonous agent. No case could more forcibly illustrate the dangerous position in which medical investigation has been placed. Here we have a distinguished professor in the largest medical school in the country, one whose previous researches had on all hands been acknowledged to be of the highest scientific and therapeutic value, very nearly debarred from the prosecution of his investigations. I would be the last to suggest that the Home Secretary or any one of Her Majesty's Secretaries of State is likely to be influenced by an anti-scientific animus; but it would require gifts almost superhuman for one individual to be a great statesman, and at the same time fitted to judge as to what physiological experiments are proper, and what are not so.

It is unnecessary in this place to insist upon the supreme value to medical science and to humanity of experiments, physiological and pathological, on living animals. I need here only impress upon you the duty of striving earnestly for the enfranchisement of science from those trammels with which ignorance and prejudice have surrounded her. The old Act for the Prevention of Cruelty to Animals was really all that was required to protect the lower creation against wanton cruelty. The Vivisection Act is not only mischievous in relation to medical science, but is absolutely superfluous as regards any desirable object. What you must strive for is not the modification, but the total repeal of an Act which, so long as it remains on the statute-book, is an insult to our profession, and discreditable to the nation as a most serious obstacle to scientific progress, and unworthy of the vaunted enlightenment of the nineteenth century.

In leaving this subject I would impress on you the importance of treating it seriously and dispassionately. No doubt the way in which the agitation has been conducted and the imputations that have been cast on our profession have made it somewhat difficult to do so; but I hope that you will never, in mere professional or personal dispute, lose sight of the supreme gravity and importance of the general interests involved. In particular, you must make allowance for the difficulty experienced by the laity in understanding what seems so clear to us. You must remember that they either are completely ignorant of physiology and its position as the very foundation of medicine, or have, at most, studied it without the sense of responsibility necessary for full appreciation of its importance. For, to use the words of Helmholtz, "it would seem that one must have stood in the presence of the dying and looked on the agony of their despairing families, and have asked one's self the serious questions whether one has done all one might have done to avert the impending doom and whether science has provided all the physical means and help she should have provided, before one can understand how theoretical questions as to the methods of science may become of oppressive gravity and of fearful practical significance."

The next public statutes to which I shall refer are those relating to vaccination. There are, so far as I am aware, no persons in this enlightened kingdom of Scotland, and, I believe, very few anywhere, who require to be convinced of the blessings conferred upon humanity by Jenner's immortal discovery of vaccination, whereby immunity from small-pox is conferred by inoculation with a virus of practically harmless character. This vaccine virus is in all probability the same in kind with that of small-pox, but modified and mitigated in degree by passage through the system of a bovine animal. The recent researches of Greenfield, Pasteur, and others, on the malignant pustule, or splenic fever, of sheep (which appears to have its human equivalent in the "wool-sorter's disease") and on the so-called fowl-cholera, have demonstrated the possibility of analogous dilution and mitigation of the virus of these diseases, so that inoculation may safely be practised, and subsequent immunity from the malignant form of the disease conferred. These brilliant results, which could have been obtained only by long-continued and careful experiments upon living animals, will prove, it is to be hoped, even to the meanest capacity, the wickedness and folly of legislative interference with scientific investigation; for, as has been pointed out, they open up a still vaster field of research, and lead to the well-founded hope that, in time, similar safe prophylactics may be found against many of the other diseases to which the human race and the lower animals are still exposed, such as scarlatina, measles, etc. in the human subject, distemper and rabies in the dog, and so forth.

Under the existing statutes regarding vaccination, orders for the performance of the operation are issued to all parents or guardians who may have failed within a specified time to have it performed upon the children under their charge. By the Act for Scotland the defaulting parent may repeatedly be summoned and subjected to fine up to twenty shillings, or, failing that, to imprisonment up to ten days. Under such regulations vaccination on this side of the Tweed is practically universal and compulsory. In England, however, the case appears to be somewhat different, inasmuch as, after the infliction of a first penalty for non-compliance with the provisions of the Act, the defaulting parent may practically set the law at defiance.

As I have said, there are few anywhere who are not convinced of the necessity for vaccination. There are, however, especially in England, a few ("anti-vaccinators," as they are termed) in connection with whom cases occur, now and again, which must impress upon all reflecting men the urgent necessity for legislation of a more stringent character. One such case occurred quite recently, and, as recorded in the newspapers, may be fresh in the recollection of many of you. Last summer an outbreak of small-pox occurred at Rotherhithe, in London, in connection with which the following facts were elicited—I virtually quote from the newspaper account:—William Escott, a shoemaker, living at 298 Southwark Park Road, had been for many years a leading anti-vaccinator, and had so evaded the Act that no member of his family had been vaccinated. About four months ago one of his children took small-pox. No medical man was called in, but the child's mother nursed him through the illness, and the child recovered. Immediately after this the mother took the disease and died. Then two children became ill with confluent small-pox, and both died; and on the 17th of August three others were removed to the hospital suffering from the same disease. After the death of his wife Escott borrowed from a neighbour, named Angus, a suit of black clothes, in order to attend the funeral. The clothes were kept some days in Escott's house, and then returned. The result was that Angus took small-pox, and was removed to the hospital, where he died on the 14th August. Nearly every house in Escott's neighbourhood was infected, and sixteen cases were removed to the hospital.

It is impossible to overrate the importance of the lesson conveyed by this lamentable story. Here was a serious outbreak of a deadly disease, involving at least twenty cases, with four deaths, which, humanly speaking, might have been avoided had vaccination been practised on this shoemaker's family. The question at once arises, Who is responsible for this? Who is guilty of the murder of these unfortunate people? It can scarcely be said that the shoemaker is responsible, for it is evident that he is most fittingly to be designated as a dangerous lunatic. The real blame is attachable to the imperfect state of the law, and for that the community at large, with its representative Government, is responsible. Such instances should impress upon all, and especially upon medical men, who are naturally looked up to as guides in such matters, the necessity for immediate revision of the law. Were vaccination made really compulsory, we should have no more such deplorable occurrences as that just related; and, if in this way the State were to assume the responsibility for the consequences of vaccination, it is possible that the conscientious scruples even of such men as Mr Escott might be dissipated. It seems monstrous that the endurance of even any amount of fine or imprisonment should enable a parent or guardian to withhold a child from vaccination. Nothing short of absolute compulsion can meet the exigencies of such cases. If the parent or guardian refuses compliance the duty of the State is clearly to step in and vaccinate the child.

In connection with this subject of vaccination there are various important questions which undoubtedly require careful investigation, and may possibly lead to revision of the procedure. Among such questions there is that of the alleged weakening of the virus, with impairment of its protective efficacy, by transmission through a long succession of children; and, again, that of the chance of some other virus being introduced along with the vaccine matter. It is not improbable that examination of these questions may lead to the more extensive employment of vaccine lymph direct from the cow or calf, but, in any case, the immediate necessity for compulsory vaccination is none the less imperative.

The last statutes to which I shall draw your attention are what are known as the Contagious Diseases Acts. Upon these I shall only touch lightly — not that the subject is unimportant — but simply that there has been so much unsavoury discussion of them that one is disposed to run the risk of saying too little rather than too much. In these Acts (whose operation is limited to certain naval and military stations) provision is made for the entry upon the police books of the names of all women known to be engaged in prostitution. Such women have to report themselves at intervals, and are then subjected to medical examination, and if found suffering from contagious disease they are sent to hospital, and there kept under treatment. The effect of these Acts has been to diminish enormously the amount of syphilitic and allied disease in the stations referred to; but, beneficial as they undoubtedly are, they have been subjected to persistent attack by very much the same class of persons as those who would prefer the claims of the lower animals to those of suffering humanity. It has been alleged that by these Acts an infamous trade has been legalised; that immorality has been directly encouraged; and, further, that cases have occurred where honest women have been suspected of prostitution and their feelings outraged by procedure under the Acts.

As to the first allegation I would remark that the infamous trade is not legalised, but is only restricted, and very properly so, where it seriously interferes with the public health.

As to the second allegation, that immorality is directly encouraged, the idea involved is that the diseases in question act as deterrents from a vicious course. One would almost suppose that the opponents of these Acts looked upon "contagious disease" as a divine institution, with which medical science had nothing to do, and which it were sinful in the State to prevent! The idea just referred to, however, even if it were in any cases well founded, is certainly not worthy of consideration as bearing on the subject on hand. And it can hardly be a satisfaction, even to those who would encourage syphilis as a moral agent, to know that the disease in question not only undermines the constitution of the first recipients, but extends its effects almost indefinitely to after generations.

As to the third allegation all I have to say is that if an honest woman, by her appearance, dress, manner, or the company she keeps, is mistaken for what she is not it is a great pity.

With regard to the Acts themselves the only question, as it seems to me, in the least worthy of consideration is that as to whether their operation should not be extended to all our large towns.

In offering the foregoing remarks—imperfect as they are—on the Acts relating to vivisection, vaccination, and the contagious diseases, it has been my object to impress upon you, as strongly as I can, the duty of all to keep ever before them, in its most literal acceptation, the maxim "*salus populi suprema est lex,*" and to allow no considerations, sentimental or other, to distract them from that cardinal principle. The chances of the infliction of unnecessary pain in scientific experiments, of accidents in connection with vaccination, or of mistakes as to a person's profession, are surely trivial in comparison with the alleviation of human suffering and the maintenance of the public health.

In conclusion—and to return to where I started from—I cannot too strongly recommend to the students of our great Medical School the advantages of a society such as this. There are many, I am sure, who look back upon their association with the Royal Medical Society as the turning-point in their lives, as having been the stimulus which first urged them forward to a successful career.

Part Second.

REVIEWS.

Minor Surgical Gynecology: a Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice for the Use of the Advanced Student and General Practitioners. By PAUL F. MUNDÉ, M.D., New York. London: Sampson Low, Marston, Searle, & Rivington: 1881.

Also the same, published by Wm. Wood & Co., New York: 1880.

THESE two copies of the same book form each a volume in the Libraries issued by their respective publishers in England and

America, but we believe that, contrary to the general rule, this work may be obtained separately. It is a large, closely-printed volume of 374 pages, with 300 illustrations. The author states that he has tried to avoid giving it the appearance of a surgical instrument maker's catalogue, but it looks at times uncomfortably like one. For instance, in the 28 pages devoted to "specula" there are 46 cuts, and in the 47 on pessaries 63. As in the letter-press, however, the good is carefully sifted from the bad, and distinct directions given when each instrument should be used, we are quite disposed to pardon the resemblance. The book is addressed to those who are not in the daily habit of treating gynecological cases, or who have only had a limited practical training in the subject, and to such we can cordially recommend it, as in its pages they will find all that they will be likely to require. Plastic operations, and operations for the removal of new growths, etc., are not touched upon, as the author considers that all such should be put in the hands of specialists, and also, as he justly says, because they are well enough described in the ordinary text-books. The first third of the work is taken up by directions as to the examination of patients, verbal, without, and with instruments. Then follow chapters on Catheterization; Dilatation of the Urethra; Injections into the Bladder; Application of Medicinal Agents to the Vagina and Cervix; Tamponade of the Vagina; Applications to the Endometrium; Dilatation of the Uterus; Curetting of the Uterine Cavity; Local Depletion of the Uterus; Injection of Medicinal Substances into the Tissue of the Cervix and Vagina; Reposition of the displaced Uterus and Ovaries; Pessaries; Artificial Impregnation; Massage; The Hypodermic Injection of Ergot; and on the Gynecological Armamentarium. We are a little afraid that the tendency of the book will be to lead to some pernicious and unnecessary meddling with cases, a result which, from what we know of the author's other writings, he would be the first to deplore.

The Transactions of the Edinburgh Obstetrical Society. Vol. VI.
Session 1880–81. Edinburgh: Oliver & Boyd: 1881.

By a new arrangement with the publishers the Society has this year presented a separate volume for a single Session, and its goodly size bears evidence to great vigour among the Fellows. It is a pity, however, that the index shows similar signs of careless compilation to what we have previously noticed.

The quarterly reports of the Maternity are continued, but a hiatus is caused by an omission on the part of Dr Keiller, which is to be regretted.

Among the original articles we have an excellent "Method of Case-taking in Midwifery" by Professor Simpson, and his form, we believe, is now in general use in the Maternity Hospital here. Dr Croom contributes a very good paper on "The Systematic Use of Antiseptics in Midwifery Practice," which elicited an interesting discussion. His conclusions on "A Complication of Occipito-Posterior Position of the Vertex" will, we think, require further and independent observation before being generally accepted. Dr Hart continues his series of interesting and scientific studies on topographical anatomy in a paper on "The Shape of the Female Bladder," and also gives a suggestive communication on "Some of the Phenomena of Parturition in their Clinical Aspects." There are two papers on different forms of incontinence, each with a special treatment, by Dr Milne Murray and Dr Milne Chapman respectively, and their special methods are well worthy of a trial in suitable cases. In Dr Bell's (Glasgow) paper on "An Improved Method of treating Uterine Displacements" we fail to see anything either original or promising.

The rest of the volume, and perhaps the most interesting part of it, consists of clinical records of cases. We cannot mention them all, but may note Dr Angus Macdonald's three elaborate papers on "Calculus in the Female Bladder," "Two Cases of Chronic Inversion of the Uterus," and "Fourteen Cases of Completed Ovariotomy;" "On Extra-Uterine Conception," by Dr Charles Bell; "Two Cases of Labour in Rickety Pelves," "Case of Early Viability," and "Congenital Closure of the Posterior Nares," by Dr Ronaldson; "Placenta Prævia," by Dr Glaister; "Fibroid Tumour Complicating Labour," by Dr Sang, etc. Perhaps the best among all the well-recorded cases with which the book abounds is one by Dr Wm. Turner on "Delivery by the Breech through a greatly Narrowed, Flat, Rachitic Pelvis." A more carefully written record we have seldom read. The chief interest consists in the fact that Dr Turner gives accurate outlines of the brim of the pelvis and of the head of the child which he succeeded in bringing alive through it. The woman, a Glasgow Maternity Hospital patient, died of septic peritonitis, and the pelvis was secured and shown. The antero-posterior diameter at the brim was under 2¾ inches; but, not content with giving the mere measurements, Dr Turner has laboriously worked out the superficial area of the two outlines he gives, and has found that the area of the brim was less than the area of the presenting plane of the child's head by 1·209 square inches. With this case as a starting-point, Dr Turner strongly and at some length advocates turning in preference to the use of the forceps in such cases.

As a collection of valuable and well-digested clinical material, we can cordially recommend this volume of the Obstetrical Society's Transactions to the profession.

A Dictionary of the German Terms used in Medicine. By GEORGE R. CUTTER, M.D., Surgeon to the New York Eye and Ear Infirmary; Ophthalmic and Aural Surgeon to the St Catherine's and Williamsburgh Hospitals, etc., etc. London: Baillière, Tindall, & Cox, 20 King William Street, Strand. 8vo. 1881. Pp. 304.

A German-English Dictionary of Words and Terms used in Medicine and its Cognate Sciences. By FANCOURT BARNES, M.D., M.R.C P., Physician to the British Lying-in-Hospital; Assistant-Physician to the Royal Maternity Charity of London, etc. London: H. K. Lewis, Gower Street. 8vo. 1881. Pp. 300.

NEITHER of these works can be rightly called a Dictionary. They are merely glossaries, and have simply the corresponding English words affixed to the German with no explanations or amplifications. Save in the name, however, this is no objection to the books, as a good German-English glossary would be more useful than a Dictionary, and would supply a felt want in that direction. Cutter's book is an English edition of an American publication, and Barnes acknowledges it, along with eight others, as having supplied him with material upon which he has based his work. To what extent he has drawn upon it we will see further on.

Cutter, in his preface, says that he has compiled his book by noting down words as he has met them in his reading, and naturally, under such circumstances, there are omissions which will doubtless be rectified in a future edition. He has produced, however, a handy and moderately full and accurate work. But we think that its usefulness would be greatly enhanced were the author to attend to the following points:—

1*st,* Omitting such words as, though they doubtless occur in medical writings, yet are to be found in every ordinary dictionary, and cannot be called "Terms used in medicine," such as Gedächtniss geheim, Blick, Fehler, matt, Meissel (chisel), Mitleidung, munter, Müdigkeit, etc.

2*nd,* Omitting words identical in the two languages, as Amputation, Anastomosis, Anatomist, bronchial, Carunkle, Doctor, Ganglion, Finger, Medicin, membranös, Mesokolon, etc.

3*rd,* Omitting technical words which are common not only to English and German, but to various other languages.

4*th,* Not reprinting in full the primary part of compound words along with all their compounds, but representing it by an initial letter. This may appear a small matter, but, were it attended to, the size of the volume might be reduced by, we should say, a sixth. For instance, Arzenei, Drüsen, Gefäss, Gehirn, and Gelenk, have each about 50 affixes; Bauch, Brust, Darm, and Nerven, each 100; Hirn, 120; Herz, 130; Haut, 180; Augen, 190; etc. Very many of those compound words, too, explain themselves so easily that their insertion is unnecessary.

5th, By giving more careful and preferably English translations for such words as Abzugskanal, canalus emissarius, Adel, panaritium, Afterkrampf, proctospasmus, Afterweh, proctalgia, Alterspflege *gerocomia*, Altersspital, *gerocomium*, Armenspital, *ptochocomium*, Gaumenentzündung, uranis-conitis, Gelenkeiterung, pyarthrosis, arthropyosis, Geschwüröffnung, oncotomy, Gesichtsbeschauung, prosotoscopy, etc., etc.

Barnes's book differs from Cutter's in his not giving the genitive and plural terminations of the nouns or the auxiliaries of certain verbs—information which is often indispensable in a dictionary of German. He has also added words from the cognate sciences—Botany, Zoology, and Chemistry—very many of which, however, as the names of animals, plants, and trees, are to be found in an ordinary dictionary, while others do not strike us as having any great claim for admission. In regard to the strictly medical part of the book we find that every one of the points to which we have taken objection in Cutter is repeated *word for word*, even to the absurdities we have italicized. More than this, we find that where Cutter has made mistakes either in spelling or grammar, Barnes has done likewise, as Grove's for Grave's, value for valve (under Heilwerth), Zähnfaule for Zahnfaule, and many more of what are evidently printer's slips in Cutter have been repeated by Barnes's printer, suggesting the ugly idea that the London writer must have freely made use of scissors and paste in compiling the proof of his work, and this idea is strengthened when we examine the two books even cursorily. In proof of what we have said, we will ask the reader to remember that the following quotations are *identical* in the two works, *even to the punctuation*, and that examples of the same similarity are to be found by the score on every page.

Abschürfen, } v.a., to remove the scurf; *sich die Haut—*, to
Abschurfen, } tear or graze the skin.

Blödsinn, m., } weakness or imbecility of mind, stupidity,
Blödsinnigkeit, f., } idiocy.

(The latter of these words is out of its proper sequence in both books).

Chyluskörnchen, n., chyle, granule. (The last comma, which is inserted by mistake in Cutter's American edition, is also found in Barnes's.)

Deprimirin, v.a., to depress; *ein — der Puls,* a weak pulse; den Staar — , to couch a cataract.

Erweitern, v.a., to dilate, widen, enlarge, expand; *der —de Muskel,* dilator; v. refl., to expand; hypertrophy.

Fluss, m., flow, flowing, flux; fluxion; rheum, catarrh; cold; *weisser —*, the whites, leucorrhœa; blenorrhœa.

But it is needless multiplying examples. We can almost say that three-fourths of Cutter's words with their definitions are merely reprinted in Barnes's, and that the latter writer has not taken the trouble to eliminate the mistakes in spelling or punctuation, but has even slavishly followed the same sequence when more than one meaning has been given by Cutter. Any alterations we have observed which Barnes has made on Cutter's original are slight and trivial. We purposely refrain from comment, but will leave our readers to pass their own judgment on the above facts.

Of the additional medical terms Barnes inserts, many of them are unimportant and unnecessary. For instance, *Mechanische Verletzungen der Alveolen und des Zahnperiosts*, pl., mechanical injuries of the alveoli and periosteum; *Mechanische Verletzungen der Zähne*, pl., mechanical injuries of the teeth; while under *Mechanisches Hinderniss in der Thätigkeit der Gebärmutter* he indulges in quite a treatise on the various mechanical obstacles to the action of the uterus, giving the German for each cause and then the English, though the task of translating any one of the twenty-five short sentences he introduces might be safely left to a schoolboy who knew enough German to be able to use a dictionary. Taken altogether, then, what additions he has made to Cutter's book cannot be said greatly to increase the value of his production, so that of the two we would recommend our readers to consult the original work. At the same time, we would hope soon to have a simple and more handy edition issued, which will, at the same time, be smaller and somewhat fuller.

Archives of Laryngology. Vol. II. No. 3. July 1881. New York: G. P. Putnam's Sons.

THE first contribution in this number is by Dr Felix Semon, London, "On the Proclivity of the Abductor Fibres of the Recurrent Laryngeal Nerve to become affected sooner than the Adductor Fibres, or even exclusively, in Cases of undoubted Central or Peripheral Injury or Disease of the Roots or Trunks of the Pneumogastric, Spinal, Accessory, or Recurrent nerves."

The question mainly at issue here is as to whether the recurrent laryngeal nerve, which supplies all the muscles of the larynx except the crico-thyroids (which obtain their nervous supply from the superior laryngeal) is a homogeneous nerve, in which different stimuli, or stimuli from different centres, conducted through the same nerve-fibres, can at one time cause general involuntary contraction of the abductor muscles, and, at another, voluntary contraction of their antagonists; or, on the other hand, whether the nerve consists of a bundle of differentiated fibres, only surrounded by common neurilemma, which have ganglionic centres of their own. The author shows the importance of the above, inasmuch as he proves from clinical and pathological facts of his own and others that the abductors are often paralyzed alone and before the adductors, at the same time pointing out the adductors are never so affected first or alone. He accordingly strongly supports the greater probability of the second hypothesis regarding the nature and structure of the nerve. The paper is very instructive, and deserves perusal.

The next article is "The Description of a Bony Growth projecting into the Posterior Triangle of the Left Side of the Breast," by Dr Rose, Brighton.

Dr Arnold, Baltimore, has an interesting paper upon "Dilatation of the Larynx and Trachea in some Forms of Stenosis, with a Case of Membranous Stricture of the Trachea." He describes the method practised at the Vienna clinique of Prof. Schrœtter, where tubes are passed within the glottis, of gradually increasing size, until complete dilatation of the narrowed part is obtained. Two cases are reported in full.

Then follow two papers upon "Lupus of the Larynx and Pharynx," the first by Dr Knight, Boston, the second by Dr Asch, New York. The latter sums up as follows:—Is lupus of the throat a disease of strumous origin, as the French writers declare, or is it a distinct disease, as Virchow believes? Is it always possible, in cases where there is no cutaneous lesion, to draw the distinction between it and the lesions of syphilis? And what is the prospect of recovery? His answers are:—

1. That lupus of the mucous membrane may and does exist independent of any cutaneous sign of the disease.
2. That in cases where the disease exists only in the throat, it shows itself first usually on the velum, while its extension to the larynx is rare.
3. That while its diagnosis is difficult, yet careful study of the case in all its bearings will enable us to distinguish it from syphilis.
4. That treatment affords some reasonable hope of cure, and that its prognosis is not altogether hopeless.

The report of "A Case of Recurring Laryngeal Growth," by Dr Hartman, Baltimore, and of "A Case of Hysterical Paralysis of the Crico-arytenoidei," by Dr Glasgow, St Louis, complete the original papers in this number.

A Guide to the Use of the Laryngoscope in General Practice. By GORDON HOLMES, L.R.C.S. Ed. London: J. & A. Churchill.

THIS is a small work of fifty-two pages, giving a short account of how to use the instrument and apply some of the more simple medicaments to the larynx. The author's reason for placing it before the profession is, that he considers the larger works on the same subject "are so elaborate as to induce an idea in the student that this really simple aid to diagnosis and treatment is complex in its application, and exacts tedious practice before it can be employed fruitfully." There may or may not be truth in this, but we fear any man who may hold such an idea will not even trouble to peruse the small guide now before us. There is nothing new in it, except a proposed modification of Mackenzie's back movement lamp, which, however, appears to be little else than "a distinction without a difference."

Zoological Atlas, with Practical Directions and Explanatory Text, for the Use of Students. By D. M'ALPINE, F.C.S. (Invertebrata.) Edinburgh and London: W. & A. K. Johnston: 1881.

THE present work forms the second part of the *Zoological Atlas*, the review of the "Vertebrate" portion of which appeared in the July number of this Journal. The "Invertebrata" are now treated in some sixteen coloured plates. In reviewing the "Vertebrate" section of this Atlas we took occasion to remark the highly diagrammatic coloration of Mr M'Alpine's figures. That characteristic, which leads the junior student especially to expect to find practical work an easy instead of a difficult study, again comes prominently to the front in the second part of the Atlas. For example, it is difficult to conceive why the limpet or whelk (Plate XIV.) should not have been at least coloured from nature. No competent zoologist would have coloured a limpet's foot of a delicate pink hue, or have depicted a whelk's foot in the same æsthetic tint. In our opinion, the plain plates of Rolleston are worth scores of illustrations of the type seen in Mr M'Alpine's book; because the former show the structures of animal life as they really exist, whilst the plates in this Atlas, for the most part, convert into "diagrams" what purport to be actual dissections.

In the Invertebrate section of his book Mr M'Alpine has drawn his *materiel* pretty extensively from the illustrations contained in the zoological text-books of other writers. In proof of this statement we may select the following notable examples:—His illustration of Protomyxa (*aurantiaca*), Plate II., reproduces Haeckel's well-known figure of that protozoön; and it may be remarked in passing that Mr M'Alpine's *Protogenes*, *Vampyrella*, and *Myxastrum*, (Plate I.,) might be figures of one and the same animal, so far as their differences, as depicted in this Atlas, are concerned. The *Protamœba* (Plate I.) and the *Amœbæ* (Plate II.) give no adequate idea of the delicacy of these protoplasmic masses, and in Mr M'Alpine's drawings resemble lumps of dough more nearly than the Protozoa in question. In Plate III. we meet with old familiar friends in the *Gregarina* and *Gromia;* but the *Nummulite* is very unlike the reality. Plate IV. contains figures of Radiolarians familiar years ago to readers of Dr Carpenter's works. *Sphærozoum* is, of course, Haeckel's, and Stein's *Acineta* is easily recognised. In Plate V. the star-fish is treated, but the nervous system of that animal (Fig. 8) is decidedly diagrammatic. There is nothing new or original about Plate VI., wherein the sea-urchin is depicted. Plate VII., dealing with flukes, gives us Steenstrup's figure of the redia-stage; *Cysticercus* and tape-worm structure which are repetitions of text-book illustrations; and lastly, various illustrations of leech-structure, compared with which Rolleston's single figure is a far more complete guide to a knowledge of these Annelides. In Plate VIII. the "water-fleas" are to the fore as of old. Of diagrams 1, and figures 4, 8, and 9, representing the Balanus and its development, we find *facsimiles* in Huxley's *Invertebrata.* It is notable that Mr M'Alpine usually makes no reference in his text to his obligations to any authorities. Here and there (*e.g.*, Fig. 7, Plate XIV.) we find the remark, "after Huxley"; and from the letterpress of Plate IV. we learn that Mr M'Alpine's figures in the first four plates have been "mostly adapted from standard works on the subject." But if Mr M'Alpine has copied a whelk section from Huxley, why does he not likewise acknowledge his very apparent indebtedness to that authority for the diagram of barnacle (Huxley's *Invertebrata*, page 294), and for his larval cirripedes, which are reproductions of the figures in Huxley (page 296)? If he acknowledges Huxley's "crabs" (Plate IX.), why does he not own Gegenbaur or Milne Edwards for the crab's nervous system (Plate IX.)? or why pass over without acknowledgment the source (Milne Edwards) of the figures of the generative organs of sepia (Plate XVI.)? It seems invidious to mention Gegenbaur as the original of the section of the cuttlefish eye (Plate XVI.), and to omit any mention of the great French zoologist just named.

In his illustrations of the cuttlefishes, Mr M'Alpine has had his Cephalopod (Plate XV.) represented head downwards. The author thus attempts, we presume, to teach the fact that in the comparison of a cuttlefish with, say, a snail, this is the proper method of delineation. But his practice has its disadvantages. Nobody ever dissects a cuttlefish head downwards; and Mr M'Alpine is not at all explicit in his description regarding the reasons for the acrobatic posture of his Cephalopod; whilst he represents in the next plate the organs of cuttlefishes with the head end upwards (Figs. 5, 8, 10, and 11, Plate XVI.) We are unable to discover any special advantage which this Atlas will confer over a well-illustrated manual of zoology. In fact, a student, by investing a small moiety of his "funds" in a shilling box of paints, and by colouring the figures in his text-book, would produce a tolerably exact reproduction of this "Atlas." The "practical directions" are, in our opinion, too sparse to be serviceable, and the illustrations too diagrammatic to be useful. The student requires instructions for practical work as full as those of Huxley and Martin, and he requires plates as true to nature as those of Rolleston. Mr M'Alpine's book will not, so far as we can discover, supply the great want of the day—an Atlas which, to zoologists, will represent the plates of Ellis in human anatomy. As it is, the Atlas under review is practically a reproduction of plates already in use in text-books of zoology—an opinion we have already expressed in reference to the "Vertebrate" section of this book, and which the examination of the "Invertebrate" section serves only to confirm.

The Opium Habit—A Clinical Lecture. By Charles W. Earle, M.D., etc. Chicago: Chandler & Engelhard: 1880.

Professor Earle, as Physician to the Washington Home for Inebriates, where a number of cases of opium eating have been treated, is able to speak from experience and with considerable authority. His lecture, which was delivered at the Women's Medical College and subsequently read before the West Chicago Medical Society, is carefully and dispassionately written, and has evidently been prepared with great care and after considerable trouble in ascertaining facts. From the various chemists in Chicago he got information as to the number, sex, age, occupation, etc., of their customers who purchased narcotics, and the kind and quantity used.

Some of the facts with which he furnishes us are as follows:—About three to one were females—age mostly from 30 to 40. Most belonged to the middle classes, and were married. Morphia was used most frequently; gum opium next. The quantity varied from a few grains of morphia to a drachm daily. One lady bought half a gallon of paregoric every week. (A large number of ladies, known to the druggists, were in the habit of consuming small quantities daily unknown to their friends.)

The effects of opium eating, as observed by Professer Earle, are physically (at first various but ultimately) a "sullen, haggard, and apathetic appearance, impaired appetite, poor digestion, constipated bowels, vesical and sexual torpor, and a sluggish condition of all the functions of the body." Morally the results are, "the man avoids society, . . . he neglects his family, . . . and sooner or later moral rectitude, every noble impulse, every generous thought, is swallowed up in the terrible fight to possess more and more of the narcotic, to obtain which, in almost every instance, the victim has become an inveterate prevaricator."

In regard to prognosis, Professor Earle seems to consider that the opium habit is not dangerous to life (he does not say whether it shortens life or not), that the narcotic may be taken away from the opium eater with perfect safety, but that relapses are very liable to occur because the patients "belong to that class who bear pain badly, and desire relief at any cost."

As to treatment, our author is decided that gradual is preferable to sudden withdrawal of the drug, as being less dangerous. In either case, however, there are certain symptoms which appear in regular order, and which are tabulated thus—Coryza about the second day after discontinuance, diarrhœa and vomiting next, muscular cramps. Great depression comes on early, accompanied by sleeplessness. The coryza soon disappears, the diarrhœa is generally controlled by ordinary astringents (of course excluding opium and its preparations), and the muscular pains are relieved by warm applications, etc. The depression is met by food, tonics, exercise to body and mind, etc. There is one remedy which seems to be of great benefit, namely, coca. Where it is used, Professor Earle considers that opium may be taken away at once without great danger. For sleeplessness time may be trusted to in some cases where the constitution is strong, when, after five or six nights, natural sleep comes from exhaustion. But usually some hypnotic has to be given, such as chloral, or bromide of sodium.

In giving chloral or coca it is necessary to beware that a second evil habit is not engendered in the curing of the first. In regard to the coca, Professor Earle sums up his opinion thus,—" While we have in coca an agent which is of undoubted value, its indiscriminate use should be interdicted"

The last statement which we think necessary to quote is, that "the symptoms described as taking place after the withdrawal of morphia are not so severe in persons who take the drug hypodermically as when the opiate is taken by mouth."

Davos Platz, and the Effects of High Altitude on Phthisis. By ALFRED WISE, M.D. London: J. & A. Churchill: 1881.

DR WISE visited Davos in 1879–80, and this little *brochure* is the result of these visits. He enters lucidly enough into particulars concerning the elevation, drainage, etc., of Davos, but his three pages entitled a "Cursory View of Phthisis" form a very hasty sketch, and might as well have been non-existent, in so far as information regarding that lesion is concerned. In other chapters of this book a good deal of useful information is afforded; but a whole batch of weather reports for the latter part of 1880 forms an appendix, the utility of which we entirely fail to understand. Dr Wise might, in short, have penned a much more informatory treatise in one-half the space he occupies in this book, which consists of opinions obtainable from any good guide-book to the Continent.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING II.

Wednesday, 7th December 1881.—Dr P. H. WATSON, *President, in the Chair.*

I. *Dr Buist* showed the THORACIC VISCERA of a patient who died the previous day from malignant stricture of œsophagus, followed by circumscribed gangrene of left lung and double pneumonia.

II. *Dr Allan Jamieson* showed two specimens of SALVE MUSLIN sent him by Dr Unna of Hamburg, the inventor. Dr Unna had invented both salve muslin and plaster salve muslin as convenient means of applying ointments and plasters. The preparations were put up in rolls ready for use, and when a piece was required they had simply to cut it off and apply it to the part, fixing the plaster muslin with a bandage. The ointments in the two specimens were the iodide of lead and the benzoated oxide of zinc, but any other ointment could be prepared in the same way.

III. *Dr Miller* showed a URETHRAL CALCULUS he removed from a patient in Dr Duncan's wards when he had charge of them. The man was sent in with an impassable stricture so-called. No instrument could be passed into the bladder, but the cause of obstruction was not a stricture, but a calculus. This Dr Miller cut down on and removed. The preparation was interesting, first, because of its large size; secondly, because there were two calculi, and thirdly, because of the relation of these two to each other. They seemed to have been originally one, but now one fitted into the other in the form almost of a cup and ball, and where they fitted the surfaces were perfectly smooth and polished; elsewhere they were rough.

IV. *Dr Leslie* then read his paper ON HEREDITARY TRANSMISSION OF DISEASE.—I. METHOD OF GRAPHIC REPRESENTATION, which will appear in a future number of this Journal.

Mr Symington said he did not pretend to be acquainted with the questions involved in the investigation of hereditary transmission of disease, but he could bear witness with regard to the facility with which the patient's family history could be taken and recorded, as he had seen Dr Leslie at work in the Stirling District Asylum. The chart used was, doubtless, somewhat complicated, but it gave a large amount of information in a very scientific manner, so far as it could be obtained from the friends of patients.

Mr Chiene thought the chart would be very useful in certain cases of surgical diseases, more especially of tumours. The point he especially noted about it was, that information was given of all the members of a family—those who were in good health, as well as those who were not.

The President thought the chart would be of vast importance for life insurance information.

Dr Bruce drew attention to the fact that Dr Leslie had not provided sufficiently in his chart for individuals regarding whom no information could be got. He thought there should be some distinctive mark for them.

Dr Leslie stated that he had now taken the family history of about 120 patients in this way. In no case had he trusted the patient himself. He endeavoured to get the best possible information out of different friends. The number of individuals whose medical history could not be obtained when first filling up a chart constantly decreased by extended investigations.

V. *Dr James Carmichael* then read his paper on SOME OF THE SEQUELÆ OF ACUTE INFECTIOUS DISEASES IN CHILDREN, which appears at p. 605 of this Journal.

Dr Allan Jamieson said he was sure the Society was deeply grateful to Dr Carmichael for the paper they had just heard. He thought they ought to congratulate him on having been the first for some considerable time to have drawn for their benefit from the vast stores of clinical information in the Sick Children's Hospital. There was one point in the paper he noted to which he would like to draw attention. It was the intractability of nasal catarrh after measles, scarlet fever, etc. Dr Unna, whose preparations he had already shown, had suggested that the salve muslin might be used as a local application in such cases. He fitted it by means of a small indiarubber tube to the interior of the nostril, the tube leaving an aperture by which the child could breathe. The piece of salve muslin was rolled round the tube, and this so enveloped passed into the nostril. A portion extending beyond was divided into three or four strips, and these folded over the outside to keep the tube in position. In this way the ointment was kept in contact with the nose, and the breathing was not interfered with. This, used as a supplementary method to other forms of treatment, local and constitutional, had proved very successful. He might also say, although it had no connexion with Dr Carmichael's paper, that that form of sycosis of the upper lip which was due to nasal catarrh could only be treated efficaciously in a similar way. Both the nasal catarrh and the sycosis had to be treated.

Dr Black said that enlargement of the lymphatic glands was a common affection of the children of the natives in South Africa. In the very youngest infants this had been verified by post-mortem examinations, which induced him to think the existence of these tubercular deposits was hereditary, and that the children were really born with them. It might be a question whether the meningitis and peritonitis so common in such cases was not a consequence of these scrofulous tumours infecting the system.

Dr Carmichael thanked the members for listening to his paper so attentively. He was especially obliged to Dr Jamieson for his hints as to the treatment of nasal catarrh. These cases, as he had pointed out, were often most intractable, and he was satisfied that though the persistence of the disease was due in great measure to the debilitated state of the patient, still the condition of the nostrils of itself tended to irritate the child and affect its general health. He was not quite sure if restless children would bear such treatment, but he would certainly give it a trial. As to the question of heredity, he was very much interested in the statements of Dr Black. Any such tendency would probably favour the development of glandular hyperplasia as a sequela of acute infectious disease.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING I.

Wednesday, 9th Nov. 1881.—Prof. RUSSELL SIMPSON, *Vice-President, and afterwards* DR W. CRAIG, *Treasurer, in the Chair.*

I. *Dr Hamilton, Hawick*, showed a small CALCULUS, passed from the bladder of a patient. She had previously passed several, of which this was the largest.

II. *Dr Halliday Croom* showed—(1*st*) A PAIR OF SIMPSON'S FORCEPS, with a perineal curve added by Dr M'Vie of Chirnside. The advantages claimed by Dr M'Vie were—1st, straight traction with a long reach; 2nd, traction nearer to the axis of the brim than ordinary Simpson forceps; 3rd, ease and precision of introduction. (2*nd*) A FŒTUS with cervical and lumbar spina bifida.

III. *Dr Wm. Craig* showed two SUPERNUMERARY TOES, one from each foot, removed from a child. They were preserved in chloral.

IV. *Dr Russell Simpson* then read his paper on THE UTERINE SOUND, which will appear in a future number of this Journal.

Dr Craig congratulated Dr Simpson on his paper.

Dr Halliday Croom agreed with Dr Simpson's views on the sound. The sound had led to the bimanual. He thought the shortening of the sound, the squaring of the handle, and the description of the bimanual method of using it admirable. It was undoubtedly the case that no special uterine replacers were necessary. He believed that in difficult cases the use of the tenaculum or volsella, by straightening the canal, contributed greatly to the easy introduction of the sound.

Dr Donaldson oj Boston drew attention to the dangers of the sound, viz., the bringing on of miscarriage accidentally, and the perforation of the uterine wall. He had done the latter in one case, but no harm resulted.

Dr Peter Young approved of Dr Simpson's modification of the sound. The old instrument was far too rigid.

Dr Russell Simpson thanked Dr Croom for his remark on the volsella. As to the cautions given by Dr Donaldson, students were too apt to think that the use of the sound was uterine diagnosis. This was wrong, as the bimanual must be carefully done first. He did not think the sound a dangerous instrument when properly used. Some abused the sound because they did not know how to use it.

V. *Dr Croom* then read his REPORT OF THE MATERNITY for quarter ending October 1881.

A short discussion followed.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

CONVALLARIA MAJALIS, A NEW AND IMPORTANT REMEDY FOR FUNCTIONAL AND ORGANIC DISEASES OF THE HEART.—The use of the infusion of convallaria majalis by persons suffering from heart disease in any form has generally produced good results in my hands, but is most striking in cases of insufficiency of the mitral valves. In affections of the aortic valves, and also in cases of mitral insufficiency complicated with stenosis, its efficiency is comparatively less. This, as is well known, is also characteristic of digitalis. The cause of this unequal effect on the diseases of the several parts of the heart lies in the very nature of the physiological action of these remedies, which increase the arterial blood-pressure. The greater number of patients (suffering from mitral insufficiency, either with or without stenosis) have consulted me either during the period of complete compensation or after its cessation, when symptoms dangerous to life had set in. During the period of compensation the patients consulted me because they were unable to take even the least bodily exertion without troublesome palpitation and dyspnœa, which would compel them at once to desist, and necessitate a more or less prolonged period of rest. This class of patients, who, moreover, are excessively irritable in temper, through the effects of their affliction, generally beg of the physician to prescribe something that would lessen their irritability, and *eo ipso* prevent the occurrence of those torturing attacks of dyspnœa. Valvular disease in all, and which is so frequently the sequence of articular rheumatic cases, without exception, is productive of great irritability and peevishness. Even when it affects persons with fully-developed moral character, this disease will so much change it as to render the sufferer almost unrecognisable as the person to his nearest friends, sometimes leaving him of his former temperament and disposition only a vague general *habitus*. To these patients I have been in the habit of prescribing an infusion of the flowers of convallaria majalis (gr. x.–f ℥ vj.), in doses of one tablespoonful twice a day, and in two or three days it so far soothes their organism that it enables them to discontinue their enforced and irksome idleness, or even to undertake considerable exercise without producing palpitation and dyspnœa. The effect of the medicine, without repetition of the dose, continues from five to nine days, after which, if necessary, it may be taken again, and the same result will follow. Especial attention is invited to the sedative effect of the remedy, because the patients, during the period of full compensation and apparent health, apply to the physician with the special object of obtaining relief from their excessive irritability, and are not contented with the advice that in such cases is generally given them. We must give them something to lessen the reflex functions of the nervous system, and this is accomplished by the infusion of convallaria majalis. The patient should be instructed to take the medicine only during the continuation of the highest degree of irritability, and discontinue it as soon as his condition becomes at all tolerable; for it is not known to me as yet whether the flowers of convallaria majalis do not, like digitalis, possess a cumulative action. The infusion of digitalis, although given in stronger dose (gr. xx.–f ℥ vj.), was much less effective than the infusion of convallaria majalis made of gr. vij.–x. to water f ℥ vj. The influence of the latter, if taken during a paroxysm of palpitation and dyspnœa, is felt at once.

When compensation is no longer able to correct the consequences of valvular disease the remedy still acts satisfactorily; and it has great advantages over digitalis, as the latter, in order to remove symptoms immediately dangerous, has to be used in such large doses that not many physicians, remembering the dangers from the remedy itself, dare repeat it. Instead, therefore, of giving heroic doses of digitalis, I have repeatedly prescribed infus. flor. convallariæ (gr. x.–xij. to ℥ vj.), three to four tablespoonfuls in a day, and with excellent results, the severe dyspnœa, œdema of the feet, and râles in the lower lobes of the lungs disappearing, so that in seven or eight days, after having taken the six ounces of infusion, the patient would feel tolerably well. In cases of severe dropsy through arrest of compensation I have not yet tested the remedy; consequently I cannot say anything about its diuretic effects, although I expect it will be found very valuable (Dr Troitsky of St Petersburg).—*Therapeutic Gazette*, October 1881.

ON OIL OF ANDA-ASSU. — *Johannesia princeps*, Vell. (*Anda Gomesii*, Juss.; *Anda brasilienses*, Radd.; *Andicus pentaphyllus*, Vell.) is a large tree of Brazil, belonging to the natural family Euphorbiaceæ, growing along the coast on sandy soil, but also much cultivated in the interior. The seeds, of which there are two, seldom three, are about the size of a small plum, somewhat kidney-shaped, and covered with a firm, dark-brown epidermis. They have an agreeable almond-like or hazel-nut-like flavour, and contain a fatty oil. These seeds have been used from ancient times as an effective purgative, and have particularly been found useful, even by European practitioners in Brazil, in affections of the liver, jaundice, and dropsy. They have also been found valuable as auxiliary remedies in menstrual disturbances and in scrofulous affections.

The ordinary dose for a male adult is two seeds, which may be increased to three, or even more, with caution. They are best administered in form of emulsion, or combined with starch or sugar and mild aromatics, whereby their effect is rendered less harsh, and the tendency to vomiting, which sometimes occurs, is diminished. The oil of the seeds is also used as a purgative, but it is much less effective than the seeds themselves; an ordinary dose is about forty drops. It is also used for burning in lamps, and has the peculiar property of being a very rapidly drying oil, for which reason it is much sought after by painters and artists. The shell of the fruit is astringent, and is sometimes used for stupefying fish. After being roasted, it is held to be a sovereign remedy in diarrhœa brought on by cold and exposure.

By expressing fifty seeds of Johannesia, which weigh about 350 grams, about forty-eight grams of a fine clear, slightly yellowish, odourless oil are obtained. Its taste is at first somewhat nauseating, afterwards saccharine. It is souble in ether, oil of turpentine, and benzoin, solidifies at 8° C., and has a specific gravity of 0·9176 at 18° C.

An analysis of the fruits or seeds of Johannesia has revealed the presence of 0·4 per cent. of an active principle which the discoverer, Mello Olliveira, proposes to call *johannesine*. The pure alkaloid is but little soluble in water, alcohol, and is insoluble in chloroform, benzin, ether, and disulphide of carbon. Dr Couty found the sulphate of johannesine, contrary to the opinions of other Brazilian physicians, to be totally inert. Dr Jorves of Rio de Janeiro obtained very satisfactory results with the oil in 1860, having used it in a case of cirrhosis with dropsy in the dose of two tablespoonfuls in a cup of coffee. Dr Fazenda also obtained very good results. Not long ago Dr Joao Manoel de Castro studied the effects of the oil very closely, and arrived at the following results:—

1. Oil of anda-assu may be administered in doses of ten grams at a time without producing vomiting.
2. The purgative effect appears two or three hours after taking the oil.
3. There are usually three or four evacuations after one dose.
4. No intestinal irritation follows the use of the oil.
5. It may be employed in all cases where castor oil would be used.
6. It has the following advantages over castor oil: it produces the same degree of effect with a smaller dose, and it does not have the repulsive odour of castor oil.

Other authorities also regard it as a great advantage that it is much more fluid, and therefore does not adhere so much to the palate. Besides, the seed of the anda-assu is very abundant in Brazil, and it furnishes a great deal of oil, being about ten times as large as a castor oil bean. If the oil is employed in larger doses than ten grams, it acts as a drastic cathartic. A griping principle seems to reside in the embryo and the skin of the seed; both of these should therefore be removed when taking an emulsion of the seeds.—*New Remedies*, September 1881.

ATROPINE AND ERGOT AS HÆMOSTATICS.—Dr Tacke made the accidental observation that atropine can act as a hæmostatic in all cases where ergot or one of its preparations are indicated. While in the case of ergot an exact observance of the dose is not necessary, since only very large doses have a poisonous effect, it is different with atropine, which must, of course, be used with great caution. Ergot and atropine, though otherwise much dissimilar, yet have a slight relationship, inasmuch as they are both mydriatic. What relationship exists between this property and that of arresting bleeding must be decided by experiments in the future.

Dr Tacke administered to a woman suffering from a wandering eczema, and who was profusely menstruating at the time, daily two hypodermic injections of 0·3 grams (5 minims) of a 1 per cent. solution of sulphate of atropine (that is, $\frac{1}{20}$ grain at a time). After the first injection, already the menstruation became very moderate and normal. The same effect was produced in other menstruating females; and a very decided effect was obtained in a case of bleeding from the lungs (Dr Hager, in *Pharm. Centralb.*, No. 27). —*New Remedies*, October 1881.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

OBSERVATIONS ON FILARIA SANGUINIS HOMINIS IN SOUTH FORMOSA (*abstract*).—On taking charge, in August 1879, of the "David

Manson Memorial" Native Hospital at Takow, Dr W. Wykeham Myers, at the request of Dr Manson of Amoy, set himself to endeavour to throw light on certain problems with regard to the filaria sanguinis hominis. These were:—

1. To observe the proportion of filaria-infected patients in relation to the whole number of admissions to the hospital, further noting the external manifestations present, *e.g.*, elephantiasis, lymph-scrotum, etc.

2. To note the period of appearance and disappearance of the embryos from the blood of infected persons, with a view of corroborating or disproving Dr P. Manson's recent discoveries as to the periodicity displayed by the parasites in their appearance.

3. To account, if possible, for the disappearance of the embryos at certain hours, discovering, if feasible, whether this was final as regards the swarm, or whether they lay dormant and adherent, during certain periods, in the lungs or other organs of the body.

4. To attempt by experiments on monkeys to produce conditions similar to those observed in filaria-infected men.

Although the blood of patients admitted on the general list was repeatedly examined at various hours, both day and night, particular attention being devoted to those suffering from malarial disease, Dr Myers as yet has only met with three filariated persons. One only of these was the subject of the recorded observations, the other two refusing permission for more than occasional examination. From these and other conditions this state of blood-infection does not seem common to or favoured by residence in Formosa. Only one case of elephantiasis was encountered. She said she had contracted it years before in Amoy. She had no filariæ in her blood, though looked for several times, but two were discovered in the sanguinolent lymph drawn from an enlarged inguinal gland. Yet on the mainland these diseases abound, whether one takes the earliest symptoms shown by the enlarged glands, the elephantized part, or lymph-secreting scrotum. Numbers of persons, too, come across, and even when settled in Formosa maintain their communication with Amoy, looking upon it as their ancestral home. "The observations made on embryos, after their withdrawal by mosquitoes, while I was attempting to filariate monkeys, may tend to suggest a reason for the non-propagation of the disease in the island." It is assumed that all now take for granted the fact that the mosquito plays an essential part in completing the cycle of genesis, and that if this medium is absent or incapable, the further propagation of the parasite is suspended. Dr Manson, in his search for the medium by which the canine blood filariæ attained their freedom, found that the mosquitoes which nurtured the filaria sanguinis hominis, when made to feed on an infected dog, *digested* the embryos they thus obtained, showing that if a mosquito was the intermediary host in the case of dogs, it must be a different species to that which acts as a go-between in man.

The man from whom the embryos were obtained is a native of Amoy, at present employed as a boatman at Takow. He was made to sleep under a large gauze-covered cage (mosquito house) into which, each night, were put numbers of mosquitoes freshly collected from all parts of the settlement, and to whose operations he cheerfully submitted himself, being apparently quite indifferent to both their numbers and bites. Within the cage was a breeding-trough, into which mosquito larvæ got from different places were put. This was covered with netting, into which the mosquitoes flew when they were matured, and from thence allowed to escape into the large cage. The breeding-trough was carefully covered, so that none of those which had fed could return and deposit their ova. For these latter there was a trough suspended in the darkest part of the house, and filled with water as required. Five monkeys were obtained. Four were young, lively, and apparently healthy, the fifth was phthisical. When the water in the cage became sufficiently covered with ova, it was given to the monkeys to drink; but such is their aversion to partake of water which appears impure, or in which there are objects in motion, that only when compelled by extreme thirst would they drink it. By drenching them daily this difficulty was overcome. For more than six weeks the water was administered in which the mosquitoes were daily depositing their eggs. Four of the monkeys died of pulmonary disease, common among captive monkeys. Their blood was examined each day, night and morning, without finding filariæ or anything which could be attributed to them. The monkey which survived was in November 1880 well and lively, and with no filariæ in his blood.

Every day during the time the man slept at Dr Myers's house a certain number of gorged mosquitoes were caught, which were kept alive in bottles and duly labelled. When those which had fed on the previous night were examined, several lively embryos were readily found, but at no later date were other than semi-digested remains discoverable. These, indeed, at a subsequent stage were not to be seen.

There is no doubt that in all these cases the mosquito was an inhospitable host, digesting where it should have nurtured. As the mosquitoes were collected promiscuously, without reference to locality, had the species which entertains the man-infecting filaria been common, it should have been among them. Thus may possibly be explained why there are no cases of elephantiasis or lymph-scrotum referable to Formosa, and why the filariated individuals came from Amoy. Should it turn out that in Formosa (an island only separated by a channel 180 miles wide from the mainland, and in constant communication with Amoy) there is immunity from filarial disease, and that this is due to the absence of a fit intermediary host, then a curious addition will have been made to our knowledge of the geographical distribution of this disease and the conditions necessary for its general existence and propagation.

Those here appear to be larger and darker than the filaria-entertaining mosquitoes of Amoy.

The second point to be investigated was, "To note the periods of appearance and disappearance of the embryos from the blood of infected persons, with a view of corroborating or disproving Dr P. Manson's recent discoveries as to the periodicity displayed by the parasites in their appearance." In October 1879, To Ah, the boatman on whom the consecutive series of observations was made, gave this history of himself:—He is 28 years of age, a native of and resident till 21 in Amoy. Since the age of 14 or 16 he has suffered at times from "fever and ague." When 18 or 20 he first noticed swellings in his groin. With exception of sharp attacks of "fever and ague" during the hot season (these are more probably seizures of the characteristic lymphatic fever, and differ from the malarial disease, which they resemble, in the absence of marked periodicity, there being generally a long interval between the attacks); otherwise he is in good health, well nourished, athletic, and generally fit for his work. There is nothing abnormal to be seen about his scrotum or legs. He was not aware he had filariæ in his blood. He is not unfit for considerable exertion, and says, were he free from ague, he would be quite well. He was under observation for six or eight months. As to the other two cases, one suffered from ague, the second from a callous ulcer of the leg. No enlarged glands could be detected, nor any other ailment which could be attributed to filarial infection. The blood parasites were in both cases found in considerable numbers at night and up to about 7.30 or 8 A.M. The blood was drawn from a finger by slightly congesting it with a tape, then pricking the skin with a sharp needle. Two slides were charged at each observation.

In To Ah the embryos appeared regularlybetween 6 and 8 P.M., generally a little after 6. By 6.45 they had begun to appear regularly, although still in small numbers, and it was not until 7.15 P.M. that they had become numerous. By midnight they would seem to have attained their maximum, and from that hour gradual decrease set in. In the morning they would appear to retire between the hours of 6 and 8, which gives a period of 12 hours during which they disport themselves. This is just the time, as Manson has shown, when their liberators are in active search for food, suggesting one of those remarkable but never-failing adjustments met with all through nature. Three times out of fourteen observations a single embryo was discovered at noon. On one occasion as many as 260 were discovered at midnight.

The temperature was taken before drawing the blood. There was a slight rise—more, perhaps, than can be attributed to ordinary evening elevation—at the hour when the embryos return. But from this one case, though checked to a slight extent by the two others, the temperature bears no marked relation to the number or activity of the embryos.

Coming now to the third object for investigation, "To account, if possible, for the disappearance of the embryos at certain hours, discovering, if feasible, whether this was final as regarded the swarm, or whether they lay dormant and adherent, during certain periods, in the lungs or other organs of the body." Dr Manson, from his writings, seems to think that the embryos do not periodically dissolve in the blood, but that they probably congregate in some organ (possibly the lungs), and there remain till the time arrives for their wanderings and withdrawal by mosquitoes. In post-mortems made on dogs this accumulation of embryos was found. But, in dogs, embryos are at all times circulating in considerable numbers in their blood. After death, when the blood is in a state of stagnation, a drop of blood taken from any great hæmic collection would likely contain a proportionately larger number of embryos than a drop taken by a minute puncture in a small vessel while in active circulation during life. One can scarcely reason, however, that where embryos are found in greatest numbers post-mortem, there they rest during the life of the host at certain periods. Again, it is doubtful whether the relatively few mosquitoes which can get at either dogs or men during the limited time available for their operations could make any appreciable diminution in the myriads of embryos which must be existent in the body. It is much more likely that nature has provided by this very excess for the security of propagation, at the same time providing means for the absorption of the residuum in time to make way for a fresh supply. Diurnal solution is therefore suggested as the end of those embryos which do not come within mosquito range.

If the embryo be constantly watched after withdrawal from the body, the primary symptom of debility visible is a tendency to stretch itself out. At first the oval which it forms when in a state of vigour and activity will be seen to become more and more perceptibly elongated. The almost indistinguishable movements will appear more isolated, and as weakness increases these change into a semi-undulatory action, which at the last gradually ceases from the centre outwards, until the feeble motions of head or lash are all that remains to denote vitality. The lash becomes more distinct and the integument puts on a somewhat shrivelled appearance. When death takes place the embryo is seen to be extended, often at full length, and generally so to a great extent. By preserving the slides and watching the movements the embryos may be classed under the different stages from perfect vigour, through extreme debility, to death.

Observations were made and carefully tabulated on To Ah every quarter of an hour from 6.15 A.M. to 9.30 A.M. for seven days. From these it must be concluded that some decided change takes place in the condition of the embryos just prior to their retirement from the circulation. The contrast with the vigorous, rapidly moving organism seen at night was very marked. Then the movements are almost too rapid to be distinguished; now, in the majority of cases, irregular and with distinct pauses. Then the extension or stretching out of the body being but temporary, and apparently only with a view to alteration of position, now is permanent, and obviously the result of weakness. If it is suggested that these are but the premonitory signs of approaching and temporary lethargy, it is doubtful if in this state any mere power of adhesion would enable them to resist the force of the blood-current. Again, were the state one of torpor, the departure of the embryos would be more simultaneous, instead of being comparatively so gradual as we find it. When, on the slide, the serum of the blood became separated from the corpuscles, the embryos were invariably rendered languid in proportion to the distance which they were removed from the latter.

A series of observations were made to test the longevity of the embryos after withdrawal from the body, and so as to compare those removed in the morning with those drawn at night. In order to prevent desiccation, the slides were carefully oiled for the space of about a quarter of an inch round their rims, and only those preparations were selected on which the blood and its corpuscles were, as nearly as we could judge, equally disseminated. Those withdrawn in the evening had not entirely disappeared till 170 hours had elapsed since their removal from the body, while those obtained in the morning had entirely vanished in about 108 hours. If it be asked, Why, if the embryos die every 24 hours in the host, do they live so much longer when liberated? it may be suggested that up to a certain time the act of withdrawal is a compliance with the natural requirements of the parasite. And whereas it is not impossible that continuance in the circulation of the host beyond the time allotted to them may set up influences designedly calculated to bring about a rapid fatality, and thus clear the way for the new swarm, on the other hand, some time might be necessary before the inadequacies of the artificial state made themselves felt; and thus, in lieu of sudden and general destruction, we have the gradual decadence of strength and vigour exhibited by the embryos preserved on the slides. Solution, Dr Myers thinks, is the final process by which removal is effected; at least this seems to be the most reasonable and probable method of accounting for what is no doubt a very remarkable and puzzling phenomenon, it being borne in mind that the observations were made for the most part on one individual.

Some experiments were made as to the effect of applying various matters to the blood, so as to observe their influence on the filariæ. Water washed the corpuscles away from the embryos, and the latter, absorbing the fluid, became dilated and enfeebled, and rapidly died. The great effort of the embryo seems to be to get in contact with the red corpuscles, and as soon as it becomes affected this anxiety is more marked.

Quinine rapidly reduced the embryos to the last stage of weakness, and in this respect acted more rapidly than arsenic or salicylic acid, and these than santonine. When To Ah or the other two patients were taking quinine, the embryos were much less lively and healthy-looking. These observations throw little additional light on the effect of drugs in destroying the parental source of the embryos.

It seems tolerably certain that the *locale* of the mature worm is in the lymphatic system, and generally in the more superficial glands, so that, the exact habits of the parasite and the situations most frequently selected being first ascertained, it may be found that partial relief may be obtained rather by means of the surgeon's knife than the physician's medicaments.—Shanghai: Printed at the Statistical Department of the Inspectorate General of Customs. 1881. For private circulation.

Salicylated Starch in Eczema.—Kersch (*Wiener med. Blatt.*, No. 1, 1881) strongly recommends salicylated starch in the treatment of eczema. It is prepared by gradually mixing small quantities of pure starch with a 2 to 3 per cent. alcoholic solution of salicylic acid. When the starch has settled, the quantity of the solution present should be sufficient to furnish a layer over it. The residual solution should then be poured off, the salicylated starch pressed in stout muslin, and dried at a temperature of 176° Fahr. The eczematous patches are first deprived of their scales by the use of a 2 per cent. solution of carbolic acid and potash soap, then dried with absorbent antiseptic cotton, subsequently moistened with a 2 per cent. alcoholic solution of salicylic acid, and then thickly covered with the salicylated starch. The remedy, even allowing for Kersch's enthusiasm, seems to have acted well, and is worthy of more extended trial.—*Dublin Journal of Medical Science*, Nov. 1881.

On the Selection of suitable Medicines for the general Treatment of Syphilis.—Sigmund says that the choice of a remedy in syphilis is to be determined on when the symptoms of the general disease are such as to afford sufficient indications for the means to be employed and the mode of its administration. Syphilis frequently runs a mild course and gets better spontaneously. Energetic treatment pursued too soon may be injurious, and is useless, while it is impossible by any treatment to obviate the general disease. At the same time, it is all-essential to devote the utmost care to the primary symptoms, to observe dietetic and hygienic rules, and to pay attention to any concomitant diseased conditions. Specific "antisyphilitic" measures are, in his view, to be first employed in the second stage of the development of syphilis, in the third to fourth month from its commencement.

Agreeably to our present knowledge, the choice must lie between preparations of mercury and iodine. These are now employed in a very different fashion from of old. The therapeutics of syphilis depend more than any other group of diseases on clinical observation, for experiments on animals have resulted, in its case, in little instruction in pathology and pharmaco-dynamics.

Mercury is to be regarded as the direct, iodine as the indirect, remedy for syphilis. As is well known, one can obtain the removal of its manifestations by the outward application of very simple preparations of the first, and simultaneously can favour the formation and growth of normal tissues. What we so frequently observe with regard to syphilitic products in structures patent to the eye goes on, without doubt, in those lying deeper, especially in the tracts of lymph and bloodvessels. The carriers of syphilis, "the white corpuscles," are destroyed and excreted, healthy red ones become more numerous, and nutrition in general improves. The clinician can so indubitably establish this with respect to the most varied forms of syphilitic products, that a different verdict can only be ascribed, if expressed, to a defective way of using the remedies; it being distinctly understood that with the medicines all indicated aids to the removal of the disease are to be sedulously employed.

Iodine favours absorption both in and by means of the lymph vessels, and is thus the most powerful remedy in scrofulosis and in rheumatic and gouty dyscrasiæ. It eases the pains like a narcotic; it hinders inflammation and favours sleep; finally, it promotes the excretion of certain metals from the organism, as of mercury. Hence it is remarkably curative when used against the results of its misuse. Its internal exhibition does not permit the conclusion that the syphilitic virus is destroyed by iodine, but merely that the unburdening of the lymph and blood from the elements of the scrofulous, rheumatic, and gouty dyscrasiæ, as from mercury, makes more free the natural tendency of the organism towards recovery, and with this forwards its co-operation for the removal, or at least amelioration, of the syphilitic manifestations. Iodine exerts a plainly rapid influence on the gummata in cases where a complication, in general the scrofulous, exists. This, frequently long latent, is first evoked, even in those apparently robust, by syphilis.

The sedative influence of bromine on the nerve centres, particularly the cerebral, those of the heart, and sexual apparatus, makes it a useful auxiliary in the treatment of the syphilitic, although itself possessing no direct power over the dyscrasia.

Mild forms of syphilis disappear under the use of pilocarpin subcutaneously more rapidly than when treated by the expectant method, and severer improve. By its use alone, however, we do not obtain permanent cures, while its continued employment in increasing doses acts unfavourably on the health of the patient.

In the contest between mercurialists and anti-mercurialists which has been waged for four hundred years, were humanity and knowledge alone the motives in such a dispute, the public, the patient, and the medical man (too often difficultly placed as regards the latter) would all be gainers.—*Wiener medizinische Wochenschrift*, 15th October 1881.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

Report on a Seventh Hundred Cataract Extractions (Knapp, *Archiv. f. Augenh.*, xi. 1).—The method of operation was, as before, the combined linear section with iridectomy and peripheral capsulotomy. Results: $V \frac{20}{20}-\frac{20}{200}$ 88 cases, $\frac{20}{20}$ in 8, $\frac{20}{30}$ in 16, $\frac{20}{40}$ in 14, $\frac{20}{50}$ in 13, $\frac{20}{70}$ in 20, $\frac{20}{100}$ in 12, and $\frac{20}{200}$ in 5; $V \frac{15}{200}-\frac{3}{200}$ 7 cases; losses, $(\frac{1}{\infty}-0)$ 5 cases. The youngest patient operated on was 36. This is owing to Knapp's having resorted for some years past much more frequently than is usually done to discision. In 1880 out of 89 primary cataracts 41 were operated on in this way without a single case of inflammatory reaction worth mentioning. The youngest patient treated in this way (3 needlings) was 37. Of the cataracts, 87 were uncomplicated (only 1 unripe), and 19 complicated. In 9 of the 19 complicated cases irregularities occurred during the operation (loss of vitreous 7 times). In 8 cases the progress of healing was impeded—by slow closing of the wound in 2 cases; re-opening of the wound and diffuse hyalitis in 1 case; irido-cyclitis in 5 cases, of which the ultimate result was good in 1, middling in 3, and bad in the remaining one. The form of complication was—adherent leukoma, 1 case; congenital coloboma and atrophy of the iris, 1 case; choroiditis disseminata, 1 case: result, good in all, three; vitreous opacities along with a morgagnian cataract, 1 case (iritis, closed pupil, iridectomy, result middling); vitreous opacities along with myopia, 9 cases: good result in 7, middling in 2; subluxation of the lens, 3 cases: good results; calcareous lens, 2 cases: result, 1 good, 1 lost. No antiseptic measures were used. After operations were performed in 43 cases; iridectomy in 3 cases for closed pupil; results, 1 middling, 2 lost. iridotomy in 2 cases of closed pupil; 1 improved from $V=\frac{1}{200}$ to $V=\frac{10}{200}$; in the other no improvement, owing to opacities in the vitreous. Needling in 38 cases. Knapp considers it important that this should be done by cutting, and not tearing. This can only properly be effected under focal illumination; never followed by any reaction.

Albinism.—Forster has very carefully examined the colour sense in the case of a complete albino, and found it perfect in every respect, both as regards central and peripheral vision, although the vision was, as usual, defective. It is evident, therefore, that the retinal pigment, which, if present at all in this case, must have been extremely rudimentary, cannot be of so much importance for colour vision as some have supposed.—*Klin. Monatsbl. f. Augenh.*, October.

Hemianopsia for Colours.—Bjerrum describes (*Hospit. Tidende,*

R. 2, Bd. 8, p. 41) a case of hemianopsia met with in Dr Hansen's clinic at Copenhagen, which is probably unique, in so far as it could hardly be demonstrated except for colours. The colour sense was completely gone to the left side of the field of vision, although the peripheral visual acuity of the left side was not less than that of the right, and central vision good.

CASE OF ANOPHTHALMIA WITH CONGENITAL CYSTIC GROWTHS IN THE LOWER EYELIDS.—Cases of this kind are rare. The present case was met with in a child six months old, whose parents were perfectly healthy and not blood relations. The conformation of the skull was normal. The aperture of the lids, of a peculiar shape, curved upwards. The upper lids were very much inverted, whilst the under ones were ectropionized. On drawing the lids apart, both orbits were found to be completely empty, though the palpebral conjunctiva of both lower lids was bulged forwards by two spherical bodies of the size of normal eyes. These were distinctly fluctuating on palpation. There was no trace of movements in the balls of the orbits, which were smaller than normal, and contained a slight trace of what appeared to be cicatricial tissue. This case differs from the one described by Wecker in the otherwise perfect development of the child. It differs from the one described by Wickerkiewitz in the absence of muscular movements in the orbit, and the normal relations of the palpebral fissure. As nothing was done, it was impossible to say whether, as Talko believes to be the case in these cases, rudimentary shrivelled eyes existed farther back in the orbit, or whether the case should be looked upon as an ectropia of a faultily developed eyeball.—Skiebitzky, *Klin. Monats. f. Augenh.*, November.

NEURITIS AND RETINITIS IN CEREBRAL AFFECTIONS.—Mauthner (*Centralb. f. Augenh.*, September) distinguishes two groups of cases, choked disc and neuro-retinitis. When there is only a serous infiltration of the retina along with papillitis, the condition is one of œdema of the retina and choked disc. The occurrence of uncomplicated bilateral choked disc points strongly to cerebral tumour, although this condition is occasionally connected with cerebral abscess, meningitis, and hydrocephalus. Absence of any appearance at the ends of the optic nerve does not, however, exclude tumour. The size and nature of the tumour is in no way indicated by the neuritis. The vision in optic neuritis may remain intact until death; but if death be not pretty sudden, visual changes, amounting to blindness for a shorter or longer period, take place. Tumours frequently give rise to blindness which quickly disappears. Cases of neuritis may get well, especially when they are caused by gummata, or they may pass on to complete or partial atrophy. Mauthner is of opinion that choked disc does not occur in cases of uncomplicated Bright's disease. The treatment of neuritis depends on that of the cause. Wecker's incision of the optic sheath has not proved of any use.

THE OPHTHALMIC REVIEW is intended to appear monthly, under the editorship of Mr Priestley Smith of Birmingham and Dr Grossman of Liverpool. We extract the following from the introduction to the first number, November 1880:—"The Ophthalmological Society of the United Kingdom, established with signal success during the last twelve months, brings to a focus the best work of British ophthalmologists. But something still remains to be done. In most of the countries of Europe, and in America, journals devoted to ophthalmic medicine and surgery have been established, with conspicuous advantage to the science with which they deal. In England we have none. While our leading ophthalmic hospital has for many years past recorded its work in a series of reports which are of the highest value, countless articles and abstracts from other sources are annually scattered throughout the whole of our medical literature, and are practically buried in it. There is little doubt that an ophthalmic periodical is at present really needed. *The Ophthalmic Review,* appearing at the commencement of every month, will present, within the space of a few pages, critical notices and abstracts of all important contributions to current ophthalmic literature, British and foreign, and will at the same time afford a channel for the prompt publication of short original papers." The first number contains the first part of an interesting paper by Mr Jonathan Hutchinson on retinitis pigmentosa and heredity. Of the abstracts, those who have not seen the originals will be specially interested in the papers by Leber "On the Origin of Sympathetic Disease," and Nettleship "On Sympathetic Ophthalmia after Excision." A report of the last meeting of the Ophthalmological Society is also given. Altogether the first number promises well, and we have little doubt that the *Ophthalmic Review* will meet with the encouragement which it deserves.

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

SUGGESTIONS REGARDING THE TREATMENT OF SUPPURATIVE OTITIS.—Dr Theobald, including under the above term diffuse inflammation of the external auditory canal, chronic otorrhœa with more or less extensive destruction of the drumhead, and acute suppurative otitis media with perforation of the membrane, has been using for treatment, for some time past, a powder composed of equal parts of boracic acid and oxide of zinc, with exceedingly gratifying results. After carefully syringing and drying the ear, the powder is applied by means of an insufflator, and its retention secured by stopping the ear with a bit of borated cotton. One great advantage which this remedy possesses is its very mild, non-irritating action. The boracic acid and oxide of zinc mixture is so bland that Dr Theobald has not hesitated to make use of it even during the painful stage of otitis media. Dr Theobald relates the history of eight patients, at varying stages of acute and chronic ear diseases, where by this method of treatment, carefully carried out, the results obtained were most favourable. In the discussion which followed the value of boracic acid seemed generally recognised. Dr Samuel Sexton of New York stated that he had used boracic acid in connexion with calendula, having selected that remedy on account of its reputed healing qualities, and had found that the combination acted very satisfactorily. The calendula he added in the proportion of 25 to 30 per cent. The tincture of calendula is employed, poured upon the boracic acid, and after evaporation has been secured upon a water-bath the mass was again triturated and made ready for use. [We have insufflated, in the course of the last ten years, powders of many kinds and in all forms of combinations, but have met with less inconvenience, and much the best results as regards relief and cure of the patient's ear-disease, from boracic acid, chiefly alone, but sometimes, as we thought the case required it, with oxide of zinc, alum. exsic., or tannin. We have never tried the compound of boracic acid and calendula, but hope to do so with equally favourable results as Dr S. Sexton, who recommends as makers Caswell and Hazard of New York, who make it from Bœricke and Lafal's almost impalpable boracic acid powder.—J. J. K. D.]

THE VALUE OF OPERATIONS IN WHICH THE TYMPANIC MEMBRANE IS INCISED.—Dr Roosa has given up all operations in cases of chronic proliferous inflammation where there are perhaps adhesions between the ossicles, or between an ossicle and the promontory, and where there is no suspicion of mucus in the tympanum. In cases of accumulation of mucus or pus in the tympanum, paracentesis, *carefully performed*, is a great addition to our means of cure. The operation should, however, not be lightly undertaken. Dr Roosa uses a small needle, and makes an incision only just large enough to give exit to the pus, blood, or mucus. In the discussion which followed the reading of this paper there seemed to be a general consensus of opinion that the operation should be performed only when there was fluid in the tympanum.

Dr Roosa read a paper on "THE TUNING-FORK IN THE DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE MIDDLE AND INTERNAL EAR.—He laid down the following propositions:—1. If one ear be normal as to hearing power, and the other abnormal, and a vibrating tuning-fork C″ be placed upon the vertex or the teeth, if its sound be intensified in the ear whose hearing power is diminished, there is disease of the external or middle ear but no lesion of the labyrinth or nerve. 2. If, under the same conditions of a sound ear on one side, while the hearing power of the other is impaired, the tuning-fork be not heard better in the worse ear, even if the meatus be stopped by the finger or the like, there is disease of the labyrinth, the acoustic nerve, or brain. 3. If the vibrating tuning-fork be heard better on the mastoid than when placed in front of the meatus, there is disease predominantly of the middle ear. 4. If the tuning-fork be heard better through the air than through the bones, there being impairment of hearing power, the disease which gives rise to this symptom is situated in the brain, nerve, or labyrinth. Dr Blake of Boston uses several tuning-forks of different notes.

SELECTION OF TEST-WORDS ACCORDING TO THEIR LOGOGRAPHIC VALUE.—Dr C. J. Blake has endeavoured to arrange consonant sounds according to the intensity of tone produced by the amount of air expelled. English words he found could be readily arranged into words representing intensity of tone. The word *cat*, for instance, could be heard by the greatest number of persons, *house* by 40, and *hand* by 56 per cent. It was important to have a large variety of words.

SUDDEN AND COMPLETE LOSS OF HEARING DURING AN ATTACK OF MUMPS.—Dr Buck narrated the histories of two cases—one that of a girl who, on the third day of an attack of mumps, had a sharp pain in the ears, and found on the following day that she had lost the power of hearing; and the second that of a man in whom deafness developed without pain during an attack of mumps. In both cases both parotid regions were equally affected, but in one the deafness was one-sided. The origin of the deafness in these cases was, Dr Buck believed, in the labyrinth. In the discussion which followed, Dr Roosa, who had seen Dr Buck's second case, concluded that the nerve was in a state of inflammation, and that atrophy of its fibres would follow. Dr Burnett had come to the conclusion that the lesion in this class of cases was in the middle ear, catarrhal in character, and produced by congestion about the parotid gland (American Otological Society, Fourteenth Annual Meeting, held at Newport, R. I., 26th July 1881, Dr J. Orne Green of Boston, Mass., President).—*The Specialist*, Dec. 1st, 1881, pp. 68, 69; and *Transactions of Amer. Otolog. Soc.*, just received.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

BY J. MILNE CHAPMAN, M.B., M.R.C.S.

ON SUBSEROUS UTERINE FIBROIDS, by Prof. Ernest Börner, Gratz, (*Volkmann's Sammlung Klinischer Vorträge*, No. 202).—Attention is drawn in this paper to the importance of separating, in operation returns of abdominal section for fibroid tumours, the following two classes of cases:—1*st*, Pedunculated tumours, or such as have only a small base; 2*nd*, Cases where the base is large, and where its section involves cutting through highly vascular tissue, and cases of interstitial tumours. Class I. the writer would place in a middle position between ovariotomy and laparohysterotomy, which would then only include class II. While some surgeons have been in the habit of eliminating class I. from their operation returns, the majority have not, and hence an unduly small death-rate from such operations as for class II. cases might be inferred. The differential diagnosis between the two classes of cases is then considered, and the following points mentioned,—1*st*, Bleeding, in class I., seldom happens, while in class II. it is of almost universal occurrence. 2*nd*, Pressure symptoms on the uterus itself, bladder, ureters, bowel, and pelvic vessels and nerves. All that can be said in regard to such is that in the case of interstitial and submucous fibroids they are more frequently present and more severe than when the tumour is subserous. 3*rd*, Pain. In interstitial cases the pain is of a bearing down character (during menstruation), in submucous it resembles labour pains, and in subserous there are attacks of peritonitis with its characteristic pain. Among the less common symptoms he notices the frequent occurrence of ascites where the tumour is subperitoneal. Dyspnœa: this is purely a mechanical effect, but may be occasioned by comparatively a small subserous tumour when it projects up from the fundus. Hæmatometra, phlegmatometra, and pyometra are all rare, but are of greatest rarity in subserous cases. Sterility, though by no means a universal result of fibroid tumours, is less likely to be caused by pedunculated than by other forms. The writer says that an obstetrician will frequently discover a pedunculated tumour after labour before he meets with a case of interstitial tumour as a complication in his midwifery practice. The indications for operative interference are next considered, and the following conclusions given:—Class I. (pedunculated), attacks of pain, ascites, peritonitis, sterility, pressure symptoms, dyspnœa. (In regard to sterility, of course, class II. is out of the question, as here the uterus and ovaries are removed.) Class II., dangerous bleeding, severe pressure symptoms, or great dyspnœa.

LACERATION OF THE CERVIX AS COMPARED WITH COMPLETE INTERNAL DIVISION OF THE CERVIX, by Virgil O. Hardon, M.D. (*American Journal of Obstetrics*, No. 3, 1881).—The writer gives the following conclusions after describing the indications for each operation, and insisting on the fact of there being no inconsistency between the two, even though they should happen to be required on the same patient at different times. Indeed, he claims that there may be as much need for them both as there is for cathartics and astringents to the same individual under different circumstances. I. Parturient laceration of the cervix occurs in a womb whose tissues are in a state of fatty degeneration, and therefore have no tendency to heal. Division of the cervix is performed upon a womb whose tissues are in a perfectly normal state, with an almost insuperable tendency to heal. II. Parturient laceration interferes with a physiological function of the womb, viz., the process of involution. Division of the cervix interferes with no function of the womb, rather facilitates one. III. Parturient laceration occurs at a time when the weight of the womb is so great as to force the divided lips apart by pressure against the posterior vaginal wall, and so to prevent healing. In the other case no such tendency exists, and the incision will certainly heal as far as it is permitted to. IV. Clinical experience shows that parturient laceration is productive of a long train of distressing symptoms. Division of the cervix, on the contrary, produces no injurious effects if properly done, but, on the contrary, completely and permanently relieves a very painful and persistent disease.

A REMARKABLE CASE OF EXTRACTION OF A LARGE STONE FROM THE FEMALE BLADDER THROUGH THE URETHRA, by A. Dunlop, M.D. (*American Journal of Obstetrics*, No. 4, 1881).—The interest of this case consists in the size of the stone and the successful issue. The measurements were 2 × 2½ × 1½. The shape was oval and the stone very hard, with rough surfaces. Three-quarters of an hour was occupied in slowly dilating the urethra and extracting the stone, and absolutely no incontinence resulted. The writer insists on the importance of slowly and carefully stretching the sphincter, and thus avoiding its laceration.

ON THE VALUE OF THE INJECTION OF AN ALKALINE SOLUTION OF SALT INTO THE VESSELS FOR ACUTE ANÆMIA, by E. Schwarz, Halle (*Habilitationschrift*, from *Centbl. f. Gynäk.*, No. 20, 1881).—The writer holds that in cases of death from sudden hæmorrhage the fatal result is due not so much to the loss of blood-corpuscles as to the sudden change in the relation between the quantity of the blood and the capacity of the containing vessels. He refers to Goltz's work in *Virchow's Archiv*, No. 29, "On the Tonicity of the Vessels and its Relation to the Blood-Current." The writer, after taking two-thirds of their blood from dogs, injected a solution of salt, and from the good results he obtained, recommends this method in the human subject, not only for the collapse following profuse hæmorrhage, but also for that caused by severe wounds or prolonged operations, as in abdominal surgery, in which latter case he attributes the collapse to paralysis of the abdominal muscles. He recommends that 500 cc. should be the minimum amount injected, and says that three or four times this amount would do no harm.

A SUCCESSFUL CASE OF INTRA-ARTERIAL INJECTION OF AN ALKALINE SOLUTION OF SALT FOR IMPENDING DEATH FROM HÆMORRHAGE, by J. J. Bischoff, Basel (*Centbl. f. Gynäkol.*, 1881, No. 23).—The writer refers to the above paper, and gives his case as an instance of the value on the human subject of what had been used experimentally on animals. The patient suffered from post-partum hæmorrhage; the pulse scarcely perceptible, 156; respirations 42, had cold extremities, and was very restless; a 6 per cent. solution of salt, with a few drops of caustic potash and soda, was injected into the left radial artery in the direction of the blood-current, and the wounded vessel subsequently tied at both ends. A blunt vulcanite canula, previously rendered aseptic, was employed. In the course of an hour 1250 fluid grammes was thrown in at a pressure of a column 58 to 60 cc. high. During the injection the patient revived, the pulse sank to 122, and she became quiet. Ultimately she recovered perfectly. It was noticed that meanwhile the hands regained their natural colour and sensibility. The writer recommends similar treatment in cases where the blood-forming glands are healthy, but where there has been a sudden diminution in the quantity of blood. He suggests that even greater quantities of fluid might be injected, the injections to be continued from time to time till good results are obtained.

AN IMPROVED VAGINAL TUBE, AND THE USE OF THE VAGINAL DOUCHE DURING MENSTRUATION, by J. Hocks, Bonn (*Centbl. f. Gynäkol.*, No. 19.)—The writer draws attention to the occurrence of uterine colic with sickness, etc., from the use of the vaginal douche, which he attributes to the introduction of either air or fluid into the uterine cavity in cases where, either from retroversion or gaping of the os, the end of the vaginal tube may have accidentally lain directly opposite the opening of the cervix. He recommends the use of a spindle-shaped tube, which at its farther end divides into two smaller tubes, these, however, becoming again continuous, thus enclosing an oval space about 1½ inches long. The injection escapes by means of perforations on the inner aspects of these smaller tubes, and the end of this instrument, if introduced into the cervix, will effectually plug it. In regard to the use of the douche during menstruation, the writer states that by using such a tube, and thus preventing the possibility of fluid entering the naturally gaping cervix, and by carefully assimilating the temperature of the water to that of the body, not only is there no danger, but better results are obtained than during the inter-menstrual period.

A NEW METHOD FOR THE INTRA-UTERINE APPLICATION OF PERCHLORIDE OF IRON, by Dr Von Teudleben (*Centbl. f. Gynäkol.*, No. 24).—To obviate any danger that may arise from the use of injections into the uterus, the writer recommends the use of solid perchloride of iron made into sticks and kept in sealed glass tubes. These are to be introduced into the uterus enclosed in a perforated canula, which must be moved freely about in the cavity. A few minutes suffice for the complete solution of the stick. He refers to Martin's perchloride pencils, which are compounded of the salt with glycerine and powdered althæa root, and are therefore, in his opinion, not so useful as the ones described.

Ovariotomy during Pregnancy, by H. P. C. Wilson, M.D., Baltimore (Reprint from vol. v. *Americ. Gynec. Trans.*)—The writer narrates a successful case of the above performed by himself on a woman who was very nearly dead. The pedicle was found twisted and apoplectic. A symptom which he associates with this was sudden pain in the abdomen and diffuse mulberry-blue discoloration over its entire surface. Statistics of 29 cases are then given. Of these 24 women recovered and 5 died; 20 children were saved and 9 lost; or, in other words, 44 lives were saved and 14 were lost. Attention is drawn to the fact that, when performed early in the pregnancy, ovariotomy is neither more difficult nor more dangerous than it is under ordinary circumstances.

A New Application of Electricity, by G. Apostoli (*Annales de Gynocologie*, 1881, p. 327).—The purport of this paper is to show that by the use of galvanism to the uterus after confinements or abortions, the poles being applied to the interior of the uterus by a sound, and over the abdomen by a flat electrode, and the current carefully regulated and gradually increased, all the diseases which can be traced to parturition as a cause are avoided, and the lying-in period is made safer, shorter, and more comfortable to the woman. The writer specially recommends the use of galvanism after abortions and after abnormal or tedious labours.

Observation on the Evolution of Tumours during Pregnancy, by Paul Bar, Tarnier's Clinique (*Annales de Gynocologie*, 1881, vol. ii. p. 81).—The writer reports the following as a unique case:—A girl, aged 24, becoming pregnant, experienced severe dental neuralgia, which was followed by the growth of a tumour from the alveolar border of the jaw near the molar teeth. This tumour was very vascular, and bled easily. Examination of a removed portion showed it to be of a fibro-plastic nature. It continued to grow till the confinement, at which time it filled the whole roof of the mouth. Twelve days later it had shrunk to a fourth of its former size, and in a month it entirely disappeared.

In the succeeding number of the same journal an almost similar case of erectile tumour in the mouth is reported from the clinique of Professor Balocchi of Florence.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

An Unfortunate Occurrence after Gastrostomy.—The patient, a man aged 48, had suffered from dysphagia since Whitsuntide 1880, when only the fluids reached the stomach. Repeated examinations demonstrated impermeable stricture of the thoracic œsophagus, but the patient at that time refused the operation. By November, however, there was a great increase in the dysphagia, and, death from inanition appearing imminent, the patient consented to operative interference, and gastrostomy was performed, 19th Nov. 1880, under antiseptic precautions. An incision four inches long was made in the left hypochondrium, parallel with the costal margin. The stomach lay deeply, for the most part covered by the left lobe of the liver, and was obviously not quite empty. The organ was drawn forward with some difficulty, and secured to the wound in the abdominal parietes by twelve silk sutures, some of which involved the whole thickness of the gastric walls. The viscus was not at once incised, and the wound was secured under an antiseptic dressing. The patient rallied during the evening, and felt tolerably easy. He did not vomit, but attacks of retching came on, always attended by pain in the region of the wound. The night was passed quietly with the help of an injection of morphia, but the morning temperature was 104°·1. Nevertheless, his general condition was good, tongue moist, pulse strong, and abdomen not painful on pressure. The temperature fell slightly during the day, but the pulse became small and irregular and the tongue dry. Towards evening coma supervened, and the patient died unconscious at eight o'clock, thirty-three hours after the operation. The autopsy showed the wound to be in excellent condition; its edges normal, and the cut margins of peritoneum already loosely adherent to each other. The abdomen was not distended, and contained no fluid. On the anterior wall of the stomach, near the pylorus, and on the left lobe of the liver, there was found a layer of loosely adherent, greasy, dirty brown exudation, which on microscopical examination was found to contain undoubted gastric matters, viz., vegetable cells and *débris* of transversely striped muscular fibres. The rest of the peritoneum was free from peritonitis. A flat annular white tumour growth about 2½ inches long was found constricting the œsophagus about three fingers'-breadth above the cardiac orifice. The remaining organs exhibited no particular changes, metastatic nor otherwise. There can be no doubt that the fatal though limited peritonitis was produced by the escape of some of the gastric contents into the peritoneal cavity; whilst the condition of the wound and its neighbouring peritoneum quite precludes the idea of any infection having taken place during the operation. The structures found in the exudation undoubtedly had their origin in materials which had escaped from the stomach through the stitch punctures in the gastric walls. The stitches have to retain the organ in an abnormal position, and, being thus subjected to some degree of tension, the punctures are easily enlarged, and allow an escape of gastric contents when an attack of coughing or retching occurs. The more the stomach contains, the more will pass through the stitch punctures. If, as recent writers recommend, gastrostomy is to be resorted to early in the case, then this is a danger that will have to be the more taken into account, for, as the dysphagia will be less, so are the gastric contents likely to be more. How is this escape of matters from the stomach to be avoided in future? Sédillot took up the serous and muscular layers in his sutures, leaving the mucosa intact, but the stitches gave way in two hours, and the stomach slipped back into the abdominal cavity. Might not the danger be avoided by the application to these cases of the principles of Volkmann's operation for hydatids? But the stomach lacks the tension of the echinococcus sac. Again, might not clamps or forceps be used for a time till the layers of peritoneum have become adherent? Perhaps the best way out of the difficulty is to be found in the "immediate" method, whereby the stomach is at once opened after stitching and washed out. If we adopt the immediate method, we must include the two outer gastric coats in a first circle of sutures, and then with a second secure the mucous coat to the abdominal wall after the viscus has been incised. This method has also been recommended by Von Lesser. Schede has operated for stricture of œsophagus and pylorus after sulphuric acid poisoning. The stomach was found full, and gastric contents escaped with every stitch. The stomach was at once opened, and though the patient died two days after, the fatal result was not due to peritonitis.—Dr P. Kraske, in *Centralblatt für Chirurgie.*

ORGANISMS FOUND IN ORGANS IN CASES OF ABDOMINAL TYPHUS.—In twenty-three cases of ileo-typhus, Eberth examined the affected intestine, mesenteric glands, spleen, liver, and other organs for micro-organisms. Alcohol preparations were chiefly employed, and the sections were rendered transparent with acetic acid. In twelve cases (between the 11th and 30th days of the disease) bacilli were found more or less copiously present, collected together in small clusters. The single rods were about four times as long as they were broad, their length was about half the diameter of a red blood-corpuscle, they presented rounded threads and a pale outline. They were most numerous in the second and third weeks. They differ from the common putrid bacilli found in the sloughs of typhus in their much greater delicacy of contour, and also in their behaviour with methyl violet and Bismarck brown; they become only faintly tinged, whilst the latter take a very intense stain. It is thus in the highest degree probable that these rods are to be regarded as specific typhus bacilli. In eleven cases between the 13th and 56th days of the disease the rods were not perceived.—(C. J. Eberth, in *Virchow's Archiv*) *Centralblatt für Chirurgie.*

M. COLIN, in an article in the *Bulletin de l'Académie de Médecine,* distinguishes several forms of malignant pustule with gradations in their malignancy. These may be obtained experimentally by inoculating such animals as dogs on various parts of the body. Comparing the development of malignant pustule in the dog with the same process in man, he finds that whilst in the former the disease develops rapidly and remains localized, in the latter it runs a slower course, with a tendency to general complications. Colin endeavours to answer the following questions: — 1st, Is the anthrax pustule virulent in those animals which are not mortally affected by it? 2nd, Is it so in all, or in some only of its phases? 3rd, How is it that the virulence of the poison disappears spontaneously without giving rise to those general symptoms which are fatal in man and the herbivora? The first question is answered in the affirmative. Blood and serum from the pustule or its neighbourhood are decidedly virulent for several days. Later on the power of infection is wholly lost. The pustule is thus malignant in some of its stages only. Thirdly, Colin says that in dogs inoculated under precisely identical conditions the disease produced varied extremely—in some mere local suppuration, in others constitutional infection. The animals were killed at various periods after inoculation, and after the first twenty-four hours considerable changes were always found in the lymphatic glands. Colin is inclined to believe that the latter retard the entrance of the anthrax poison into the general circulation, and so hinder constitutional development of the disease. In general this is not the case, however. The richer the seat of primary infection is in lymphatic glands, the more rapidly is the constitution involved. As regards treatment, Colin advises cauterization in the first stage. —*Centralblatt für Chirurgie.*

SUR L'ETIOLOGIE DU CHARBON.—In 1878 Pasteur endeavoured to infect animals by means of food containing anthrax bacteria artificially produced. Large numbers of the animals died with symptoms of anthrax after an incubative stage of from eight to ten days, and the mortality was increased if small sharp-pointed bodies, such as grains of corn or thorns, were added to the food. Post-mortem it was found that these animals showed small lesions at the same places in mouth and pharynx as in animals in which the disease arose idiopathically. In consequence of these experiments Pasteur was inclined to believe that the supposed spontaneous affections really were produced by the food, and suggested that anthrax bacteria from dead and buried animals get mixed with the ground, and so with the food. This must happen before the bodies undergo decomposition, for from that time onwards the bacteria lose their power of existing. Accordingly Pasteur mixed blood from animals suffering from anthrax with earth which had been moistened with urine, and found that at a medium temperature bacteria were very rapidly developed. These were discoverable months and even years afterwards. In like manner, at a place where he had buried a sheep which had died of anthrax, he found perfectly viable and inoculable bacteria. The question whether bacteria found their way to the surface from the buried carcase, or whether those bacteria which are developed at the surface before the burial of the body are still to be found there in spite of tillage, rain, etc., was answered in a singular manner. According to Pasteur, earth-worms are the bearers of the anthrax bacteria; these latter can with all certainty be demonstrated in their excrements. If we allow earth-worms to live in earth containing anthrax bacteria, we can demonstrate these in their excrements. It is probable, then, that rain washes the germs from the excrement, and the former are then taken up by animals along with their food.—(Pasteur, in *Bull. de l'Acad. de Méd.*) *Centralblatt für Chirurgie.*

PROCÉDÉ DE VACCINATION CONTRE LE CHARBON.—Toussaint at first defibrinated and filtered blood taken from animals which were just dead of anthrax. As, however, he did not succeed in separating the anthrax bacteria with certainty by this method, he proceeded to expose the defibrinated blood to a temperature of 55° C. (155° Fahr.) for ten minutes. Animals inoculated once or twice with the fluid displayed complete immunity from anthrax poison. The influence only became certain after twelve to fourteen days. The train of thought which led to Toussaint's experiments was as follows:—Distribution of the anthrax poison is effected through the medium of the lymphatic glands, which are affected in all cases, even when the disease does not end fatally. If we bring about an artificial adenitis, diffusion of the disease is hindered. This we may produce by injection of the blood (prepared as above) of animals suffering from anthrax into the neighbourhood of the glands. In truth, the results of these inoculations, complete immunity of the animals inoculated, not only came up to, but even far exceeded Toussaint's expectations. The inoculated blood does not act by means of its morphological constituents, for it has been experimentally established that sheep inoculated in the last months of pregnancy threw lambs which were completely protected against anthrax virus. The materials carried over during intra-uterine life can, however, contain no morphological elements.—(Toussaint, in *Bull. de l'Acad. de Méd.*) *Centralblatt für Chirurgie.*

INOCULATION PRÊVENTIVES DU CHARBON.—Bouley reports some fresh experimental inoculations against anthrax made by Toussaint, which, if not absolutely decisive, still have given very encouraging results with regard to protective inoculation. It has been proved scientifically that by means of inoculation we can lend animals a certain security against anthrax poison. In order to make still more certain whether these would remain free from the disease under circumstances most favourable to infection, Toussaint intended to place equal numbers of inoculated and non-inoculated sheep in a locality thoroughly infected with the poison, and then compare their respective resisting power.—(Bouley, in *Bull. de l'Acad. de Méd.*) *Centralblatt für Chirurgie.*

RECHERCHES SUR LA TRAITEMENT DES MALADIES CHARBONNEUSES CHEZ L'HOMME.—Davaine, in his work, first describes his experiments demonstrating the action of certain substances (iodine, corros. sublim., and ext. nucis vom. specially) on the anthrax poison; in the second part he reviews certain cases treated according to his method. The experiments were undertaken on account of the following considerations:—The 1-100,000th, or even 1-1,000,000th part of a drop of fresh blood of an animal suffering from anthrax, mixed with a certain quantity of water and injected under the skin of a guinea-pig, suffices to produce the disease and kill the animal, although the quantity of water may be so considerable that it is not at all coloured by the small amount of added blood. As the virus, *i.e.*, the bacteria, in this mixture is very accessible to the action of antiseptics (iodine, etc.) we can, by addition of the latter, render the poison harmless; and it is the object of these experiments to determine how much of these substances is necessary for the purpose. Davaine found (1873) that an iodine solution (1 to 12,000) destroyed in half an hour a decided quantity of anthrax poison, whilst a much stronger carbolic acid solution was required to produce a similar effect (1–200). In 1878 the experiments were continued. Fresh blood from affected hens was mixed with various solutions of iodine (the blood forming the 1-1000th or 1-10,000th part of the mixture), allowed to stand for fifty or sixty minutes, and then 1 to 4 drops of the mixture were injected into a large number of animals. The solutions were progressively weakened. The animals underwent inoculation without injury so long as the iodine solution was of the strength of from 1–10,000 to 1–160,000. Only when the solution was diluted to 1 part of iodine in 170,000 parts water did its protective action become uncertain, and when the solutions were still further weakened the animals became infected. Solutions of corrosive sublimate gave similar results. The action of ext. nucis vom. is less easily explained, but this too seems to destroy the anthrax poison with great certainty. Davaine accordingly recommends a most energetic use of iodine in these cases, and so far his results have been exceedingly good. Only one case ended fatally. The patient, who was seven months pregnant, aborted on the eighth day of the disease, and severe hæmorrhage followed, though the disease itself was decidedly on the wane. In another case pregnancy was not interrupted. In this case, and in others published by Stanis, Cézard, Gallet, Rèmy, and Chipault, the use of iodine internally by injections into the œdematous parts brought about a speedy cure. The primary pustule was strongly cauterized in two cases with Vienna paste and corrosive sublimate. Davaine's experimental results with these drugs thus agree perfectly with those obtained in practice. These experiments are so interesting that it is to be regretted that he has not tried the effect of inoculating the animal and then injecting the antiseptic remedy. Only when this has been done will his researches be of practical and therapeutic value.—(Davaine, in *Bull. de l'Acad. de Méd.*) *Centralblatt für Chirurgie.*

RACHITIS OF THE JAWS, AND ITS INFLUENCE ON MASTICATION.—

Schmid's observations have been made in the clinique of Professor Gussenbaum at Prague, and on certain preparations of Professor Klebs. The first sketches of rachitis are to be found in Glisson, who, however, investigated rather the influence of the disease in retarding dentition. Only in recent times, more especially by Fleischmann, has its influence on the form of the jaws been demonstrated. Certain ethnological or individual mandibular peculiarities must not be confounded with the results of rachitic change. In children the most important effects of rickets on the jaws are as follow:—The lower jaw is shortened, whilst the rami often appear remarkably thickened. The median axis of the upper jaw is elongated, and there is an overlapping at the posterior edges of the os incisivum. The alveolar margins are often thickened, owing to periosteal hypertrophy. The development of the teeth is often interrupted. In adults the lower jaw, owing to a bevelling of its middle portion, loses its parabolic and takes on a polygonal form. There is a shortening of the ant. post. axis, and an inclination inwards of the molar portions of the alveolar process causes a corresponding displacement of all the lateral parts of the inferior maxilla. The surfaces of the ascending rami are uneven, and the muscular insertions thickened. The articular process is denser, short, and blunt, and the teeth are abnormably placed. Owing to an increased growth of tissue around the sutures of the hard palate, the upper jaw becomes more spheroidal, and its anterior portion describes a larger arch than natural. In some cases muscular action is shown to have produced all these changes. Deformities of the dental crowns, in the shape either of transverse or longitudinal folds of enamel, are mentioned but not explained. Schmid advocates early constitutional treatment, for the jaw is often the only part of the skeleton affected. Various orthopœdic methods of treatment may be used, but they should not be commenced until complete development of the teeth-roots has taken place, which is usually about two years after the teeth have penetrated the gums. Food must be given in such a manner as to reduce to a minimum muscular action and the mutual pressure of the jaws. The orthopœdic remedies embrace extraction, redressement forcé, digital or other pressure, and tying neighbouring teeth together with waxed thread or elastic bands.—Schmid, in *Centralblatt für Chirurgie.*

Part Fifth.

MEDICAL NEWS.

Veluti in Speculo.—I am compelled to say that the Scotch are not a pretty people—in the face. There is no place where one is so sure to see a collection of the beauties of a town as at the photographer's. If they are not there, I am of opinion they are nowhere. And while photos, as Douglas Jerrold said of daguerreotypes, are justice without mercy, still handsome people do sit for such pictures, and the artist does sometimes catch and preserve the most beautiful lineaments of their faces. Well, I have made pretty diligent search for such pictures in every town and city I have visited in this charming country, and I have not been repaid for my trouble. Scotch beauties are not there, nor do I see them in the street nor meet them in either mountain or glen or on loch or river. There are more handsome faces in either Elrod's or Wybrant's or Klauber's galleries native and to the manner born than you will see in all the photograph-galleries in Scotland. This is the truth. Nor are Scotchmen either so large or so well-shaped as Englishmen. But warm-hearted, sociable, kindly, hospitable the Scotch people are in the highest degree. Humorous and appreciative of humour, witty and appreciative of wit, capital story-tellers; fine speakers, slow but tremendously firm; delighting in argument; stiff in opinions; tender-hearted; fond of a laugh, a pipe, and good whisky; simple in their ways, their habits, and their lives, with immense reverence for spiritual things; wonderfully prolific, they have more than doubled their population in the last fifty years. Far-seeing, enterprising merchants, their vessels enter every port; patient, frugal, industrious farmers, they export, notwithstanding their own dense population, large quantities of food; their artisans ingenious, they manufacture substantial and needed things, and the products of their factories are offered in all the great marts of the world; their universities among the most ancient and the best, their scholars rank among the most erudite, their jurists among the most able, their divines far and away the most eloquent, their physicians confessedly among the most skilled. But, for all that, the average Scotch woman isn't handsome, and the average Scotch man isn't comely. Given blue eyes and high cheek-bones, and the effect is—not pretty. So here's to the land where, though the year is divided into nine months winter and three months bad weather, has notwithstanding developed a truly noble people; where, if the women are not beauties and the men are hard-featured, they are all "tender and true," which is better.—Dr D. W. YANDELL, in the *American Practitioner* for October 1881.

A PSALM OF HEALTH.

TELL me not, in scornful numbers,
  Sanitation is a dream;
Woe be to the man who slumbers,
  Thinking drains are what they seem.

Drains are real, bad gas injurious;
  If the grave is not our goal,
All past systems are but spurious;
  Carefully re-drain the whole.

Sanitation ! Sanitation !
  Is the hobby of the day ;
New tiled drains and ventilation :
  Think not once of what's to pay.

Traps get choked, pipes oft are leaking,
  And the shafts, tho' deep and strong,
Still in terror are us keeping,
  For the best cannot last long.

In the "Health Association"
  (Which will give us all new life)
Rests the hope of Sanitation,
  Down from London up to Fife.

Trust in naught but Sanitation;
  Pay your guinea. To the head
You're put right from the foundation,
  Traps within, air-pipes o'erhead.

Ill-drained houses all remind us
  Sanitation is sublime :
Shunning the Association
  Henceforth shall be held a crime.

ALIBETA.

A BUST of Dr Protheroe Smith, the founder of the Hospital for Women, Soho Square, was recently presented to the Institution by friends and patients, and was unveiled on the 15th December by Sir Rutherford Alcock, K.C.B., the chairman of the committee of management, on being placed in position in the hall of the Hospital. The work has been well executed by Mr Belt.

OBITUARY.

ROBERT OMOND, M.D., F.R.C.S.E.

ANOTHER veteran, who held an honourable place among the practitioners of Edinburgh, died on the 13th December 1881, at the ripe age of 75. In consequence of failing health, Dr Omond had been for several years almost withdrawn from the public eye; but many will still recall his pleasant, cheerful, benignant smile and his alert, active step. During his long illness he had seasons of acute suffering, borne invariably with Christian courage, patience, and meekness. His last days were comparatively free from pain, and the end was preceded by a rapidly increasing weakness.

Born in Orkney in 1806, he came south with his widowed mother and two brothers—the elder of whom is still a respected minister of the Free Church of Scotland—not long after the close of the Peninsular war, and received a considerable part of his education in Edinburgh, exhibiting, we understand, a special taste and aptitude for the exact sciences. Having chosen medicine as his future profession, he was in due time apprenticed to the late Dr Adolphus Ross, then in partnership with Messrs Bell and Russell, Fellows of the

Royal College of Surgeons. In that position he had large opportunities for practical instruction, while at the same time attending the classes both of the University and of extra-mural lecturers. Some of his fellow-apprentices may be named who afterwards became eminent in their profession, such as Dr James Duncan, Surgeon to the Royal Infirmary, Dr Fraser Thomson of Perth, and Dr M. Baillie Gairdner of Crieff. After graduating in 1828, and studying for some time on the Continent, he had charge for a short period of the practice of Dr Grant of Jedburgh, then in ill health, and afterwards finally settled in Edinburgh. He became a Fellow of the College of Surgeons in 1832, and in the course of years filled various positions in connexion with it. He was librarian for some years, an examiner for more than a quarter of a century, and occupied the president's chair in 1858 and 1859. His lot was cast on a troublous time in medical politics; but he acquitted himself with much personal credit, and with advantage to the College. At a later period, although an old man, he acted as interim secretary for some months, until new arrangements had been made.

Dr Omond had a natural aptitude for business, particularly in the line of figures and finance, and this being discovered, his friends and brethren were not slow to avail themselves largely of his services. The Edinburgh Medical Missionary Society during thirty years and more, the "Æsculapian"—a select company of professional men, with a social purpose—during a similar period, owed much to his wise and careful management of their affairs; and it may be added that his business qualifications, united as they were with rectitude and friendliness of disposition and manner, led many persons, while making their last will and testament, to covet him as one of their executors or trustees—a compliment which his habitual kindness and self-abnegation rendered it very difficult for him to decline.

This short notice of Dr Omond would be very incomplete without further reference to his character and disposition. We feel safe in saying that no member of the profession in Edinburgh was more generally liked by his brethren. This arose from the moral features already referred to—his unselfishness, his readiness to oblige, and his charming manner. He was always willing, while keeping himself in the background, and unambitious of human applause, to take trouble and help his friends when an opportunity offered. True and loyal to his own convictions, he never spoke a hard word of others, but invariably put the best interpretation on their motives to action, and even on their prejudices. Such a man could not fail to be a peacemaker and an unconscious instrument in promoting the amenities of professional intercourse.

Dr Omond married, in 1839, a daughter of the late learned Professor Traill of this University, himself an Orcadian, like his son-in-law. Mrs Omond survives him, with two sons and three daughters, and numerous grandchildren.

Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Subjective Symptoms in Eye Diseases.* By GEORGE A. BERRY, M.B., F.R.C.S. Ed.

SINCE the introduction of the ophthalmoscope the objective examination of every part of the eye has reached a degree of perfection which has no parallel for any other organ of the body. It is not unnatural to find, therefore, the attention of medical men nowadays less directed towards the subjective symptoms which accompany any pathological change in the eye than was the case formerly, when the observation of the cause lay more frequently beyond their powers. But how extensive and accurate the knowledge, and how just the appreciation, of such symptoms was in the later preophthalmoscopic times must be evident to those who have looked into the works of such men as M'Kenzie, Travers, or V. Jæger. And when at last the new means of examination was put into their hands, there were men ready, trained in the old school, and with V. Græfe at their head, to reap all but to the full, and in an astonishingly short space of time, the advantages which must inevitably have sprung from a thorough combination of both objective and subjective examination.

Nowhere has an attempt to make *much* out of ophthalmoscopic examination alone been more evident than amongst physicians as an aid to the diagnosis and localization of disease elsewhere. There can be little doubt that the information to be gained by such examination alone has been very much exaggerated. When we except neuritis optica, the retinitis of Bright's disease, and the rare cases of tubercle of the choroid, which, however, as far as I am aware, does not make its appearance until long after there is good evidence of tuberculosis elsewhere, we have exhausted the list of cases in which the objective examination of the fundus may afford *per se* important aid in establishing or confirming a diagnosis. I have excluded from the list atrophy of the optic nerve, because it is only in well-marked and advanced cases that we are justified in diagnosing atrophy without ascertaining what may be the state of functional activity, or, in other words, without a thorough subjective examination. It is not by any means rare to hear appearances pronounced as partial or incipient atrophy which a proper subjective examination would show to belong to the category of physiological variations.

I. LIMITATION OF THE FIELD OF VISION.

The examination of the field of vision is capable of affording indications of great importance from a diagnostic as well as prognostic point of view, and is worthy of more general attention than is yet accorded to it. The periphery of the retina, though not to the same extent as its centre, may receive three distinct impressions—those of light, colour, and form. The first is a quantitative, the second a qualitative impression, and the third may be looked upon as the relative appreciation of differences in either or both of the other two, affecting simultaneously (or at intervals of time sufficiently close not to cause too great a break in continuity) parts of the retina which are anatomically distinct.

The abnormalities of the light sense have not as yet received very much attention, partly because it is difficult to conceive a practical means of testing it which does not at the same time involve the sense of form, and partly because the physiology of the subject is still imperfectly known. Certain cases occur in which a marked improvement of vision takes place in subdued light, in which there is more or less day-blindness (nyctalopia). The toxic amblyopiæ exhibit this to a certain extent, generally inconsiderable, or at any rate to a degree more apparent than real; but it is the condition called *hyperæsthesia retinæ* in which it is a characteristic symptom. The condition is observed more in the tropics than elsewhere, and sometimes occurs epidemically, as in the case of our troops returning from the Crimea. In other cases, which have not as yet been sufficiently studied, there appears to be an abnormal relation between the visual acuity and the relative or absolute intensity of the light stimulus at different parts of the retina. An interesting case is recorded by Krenchel,[1] which shows the necessity which may sometimes arise for testing the light sense. Although I have elsewhere called attention to the case, it may be worth while glancing at its principal features in connexion with the present subject, as it is not improbable that the form of amblyopia there exhibited is of more frequent occurrence, although from the absence of reference to it in ophthalmological literature it has probably hitherto escaped detection. The patient, a seaman aged 33, had yellow fever in South America, during which he became blind. He slowly regained his sight, and when examined had $V = \frac{20}{20}$; field of vision slightly contracted (concentrically); colour sense normal; no definite atrophic appearance of the discs, though the vessels were perhaps somewhat smaller than normal. Although able to read the finest print, he declared that objects appeared to him to be enveloped in such a dense mist that he hardly dared venture out in the street alone, even in broad daylight. Krenchel was at first inclined to disbelieve his statements; but after having been under observation for some time it became evident that he was really the subject of some obscure defect of vision. He was then tested with Masson's disc in order to determine his power of distinguishing between different degrees of intensity of light. The disc used produced on rotation seven rings (gray on white ground), the most distinct of which, compared with the background, corresponded to a difference in intensity of $\frac{1}{15}$, the least distinct to only $\frac{1}{120}$. All these rings could be seen by an individual with normal sight. The patient, however, was unable to see any one of them, and by means of a movable black sector on a white ground it was found that the least difference in intensity of which he was conscious was $\frac{1}{10}$. This, then, offered an explanation for the difficulty which he experienced in going about alone, as outward objects not differing greatly in intensity would lose their individuality for him, and appear more or less as they do in a faded photograph.

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[1] *Klinische Monatsblätter f. Augenheilkunde*, Feb. 1880.

Abnormalities of the colour sense have received more attention, and will be considered further on.

Peripheral vision may be defective in continuity or in acuity. The continuity is subject to both regular and irregular interruptions.

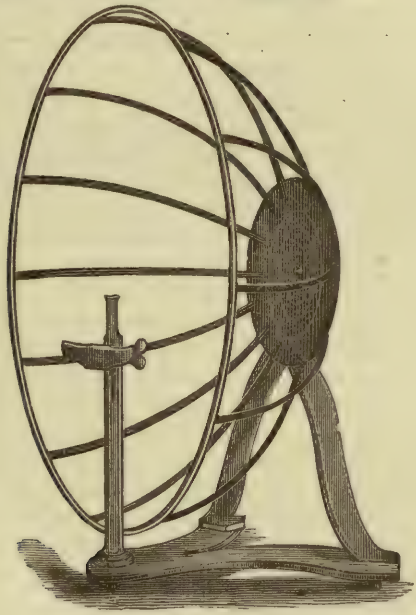

Fig. 1.

The regular manifest themselves by some limitation of the normal extent in a particular, or, it may be, in all directions. The irregular breaches are more or less blind portions surrounded by normal or relatively normal portions of the field of vision. To these the name of scotomata has been given. To make an accurate examination of the field of vision it is necessary to make use of some sort of perimeter. Fig. 1 represents the form I use. It has the advantage of enabling one to see at a glance the dimensions and form of the field, without transferring it to paper, and can be worked faster. The central portion of the sphere up to 20° all round is left entire, to facilitate a more complete examination of the region round about the point of fixation. Thus the extent and shape of a scotoma in this region, or the contour of a very contracted field, may be mapped out with the utmost degree of exactness which patience and practice render possible. For the purpose of reference, a note or diagram should be taken of the field as determined by the perimeter. The usual way in which this is done is shown in Fig. 2, which represents the normal field of vision of the right eye. In my perimeter there are twelve arms, 30° apart: this is generally sufficient. Behind it the wall is painted a dull black, so that it is easy to explore the intermediate regions when necessary. Each arm is graduated to distances of 5°. In this way the angular dimension of the field along any arm can be determined without difficulty to a degree or so. Some German authors give elaborate measurements of the field to *minutes*—a degree of accuracy which, even if it be attainable, is certainly unnecessary. If there be any doubt as to the restriction of the field in any particular case, the examination is best made by artificial light the

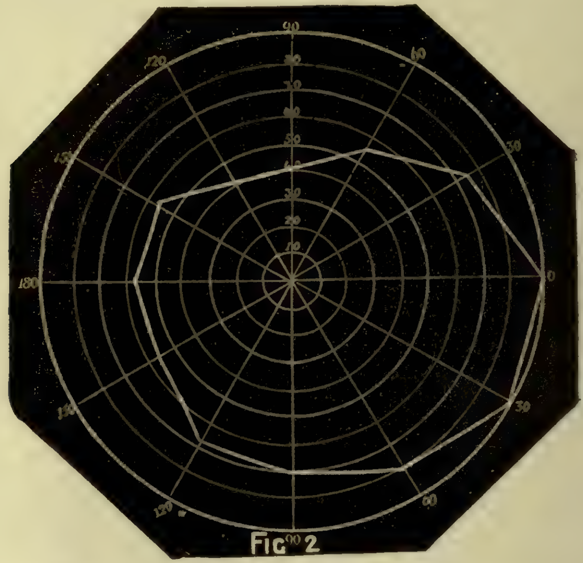

FIG 2

intensity of which is a little greater than that which begins to tell on the normal field. This is a sort of compromise between the examination of the light and form senses which is of considerable practical importance. The white object used in the examination should not be larger than 10 mm. square. It is held in position and caused to travel as desired along any of the arms of the perimeter by means of a long and sufficiently flexible black rod. The observer must at the same time stand in such a position as to make sure of the patient constantly fixing the centre of the perimeter, at which point there is a little ivory knob.

The normal extent of the field of vision is subject to variation at the upper, and slightly also at the inner parts, owing to individual peculiarities in the size and shape of the eyebrows and nose. The physiological limits may be taken to be as follows:—Upwards, 45°; upwards and outwards, 50°–55°; outwards, 90° (often slightly more); outwards and downwards, 80°–85°; downwards, 70°; downwards and inwards, 60° (variable on account of the nose); inwards, 55°–60°; inwards and upwards, 55°. The extent of the field upwards and upwards and outwards is found to be 5°–15° greater when the point of fixation is situated 20° or 30° from the centre of the perimeter in the opposite direction. This has to be borne in mind when there is a doubt as to whether or not there is limitation in this region. Thus, should the exploration with the centre of the perimeter as point of fixation only give an angular dimension of 40° for the peripheral extent of the field upwards, we should not always be right in assuming a contraction in this direction unless *no increased measurement* resulted from testing with a lower point of fixation.

The determination of the limits of the field for different colours is a matter of much greater difficulty and uncertainty, as the results are influenced by the hue and shade of the colour used, by the size of the coloured objects, and by the quality and intensity of the light under which the examination is conducted. Practically, in examining any case, I find it useful to determine the extent of my own visual field in one or two directions under the same conditions, and then allow something for individual peculiarity beside. Another precaution that will be found useful in practice is to have the test object (which it is well to make 20 mm. square) differently coloured on either side. In this way we are provided with a check on the accuracy of the patient's statements. The most convenient colour to use is some hue of red, as it is for the reds and greens that pathological defects in the colour sense first manifest themselves. If the test colour chosen be examined carefully at the inner side of the field of vision, it will generally be found to change colour. Before becoming absolutely colourless, it will become yellowish, brownish, or bluish, according to the hue and shade selected, and it is this tint which may with advantage be selected for colouring the opposite side of the test object. When the red-green perception is entirely abolished, the limits may be taken for blue or yellow, the vision for which is longer in disappearing, but the only necessity for this is to exclude the possibility of the more usual form of congenital colour-blindness, which we should have reason to suspect if the peripheral boundaries for yellow and blue were not restricted. But the determination of the limits of the field for quantitative and qualitative stimuli does not exhaust the examination of indirect vision: it is important to ascertain whether or not there is any break in the continuity of the field. Such interruptions, or scotomata, are usually divided into *positive* and *negative*, according as they give rise or not to a consciousness of the interruption. In the one case there is more or less perception of darkness, in the other an entire absence of any visual impression. The scotoma existing over the projection of the area of the optic nerve where it enters the eye is a familiar example of the negative variety, though it differs in some respects from those which arise pathologically (viz., in the manner in which the impression elicited by excitation of the retinal elements round about are mutually related).

The conditions in which some alteration or restriction of the field of vision occurs are optic neuritis and atrophy, the functional forms of amblyopia (under which group are included the various forms of amblyopia *sine causâ*, such as toxic amblyopia, amblyopia fugax, the various conditions connected with hysteria, etc.), retinitis, more especially retinitis pigmentosa, embolism of the central artery and thrombosis of the central vein of the retina, opaque nerve fibres, glaucoma, detached retina, intraocular tumours and foreign bodies, choroiditis, and coloboma.

Field in detached Retina.—The portion of retina detached can be seen with the ophthalmoscope, but it is impossible in this way, even with careful drawing, always to form an idea of the extent of the lesion sufficiently exact to be of use in comparing the conditions met with on the first and subsequent examination of any case. The most trustworthy means of making such a comparison is by plotting out the field. It must be borne in mind, however, that the freshly detached retina retains its functions to a slight extent, so that it is always advisable to make the examination in subdued light, of course under as nearly as possible identical conditions each time. Were a conscientious examination always made in this manner, I cannot but think that cases of recovery from detached retina would very seldom be recorded. A few undoubted cases have occurred. The boundaries for peripheral colour vision are narrower than the line separating the undetached from the detached portion of the retina, so that an examination with pigments might be made instead of the ordinary one, which, however, is sufficiently accurate if the precaution of using a very subdued light be attended to. Treitel has found in six cases a remarkable confusion between blue and green. This was first observed by

Leber, and ascribed by him to absorption of the blue rays by the yellow sub-retinal fluid. Certain points in connexion with the form and method of extension of the detachment, as well as of the symptoms to which it gives rise, are sufficiently characteristic to engage attention. Thus the defect in the field of vision has most frequently a more or less indefinite, ill-defined, and irregular boundary. If the field be restricted below, an extension upwards is not unlikely to follow. This may pass to either or both sides of the point of fixation, though generally it does so to the inner alone, or it may involve the centre itself in its course. Such an extension is not so likely to be the case where the first restriction, as often happens, makes its appearance above. In almost all cases of simple detachment of the retina the central visual acuity is more or less diminished, indicating some participation in the disease which has led to the detachment elsewhere. Often the subjects of detached retina are conscious of a certain degree of distortion of the images which they receive, and it is not uncommon to hear them complain of seeing colours, green, black, etc. When the detachment is caused by tumour, the defect in the field is much more sharply defined, whilst the central vision remains unaffected. If, as is often the case, the tumour be peripheral, the subjective symptoms are, sharply defined peripheral limitation of field with good central vision. If the detachment occur in both eyes, it is rare to find any great degree of symmetry, such as is shown in Fig. 3, the field of vision in a case which occurred amongst Mr Tay's patients at Moorfields.

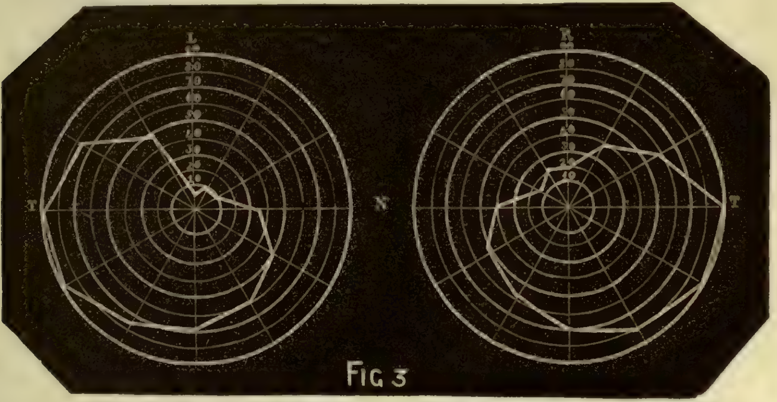

FIG 3

(H. H., a sailor, aged 28, four months' duration, V $\frac{6}{200}$ and $\frac{20}{200}$, slight H.)

Retinitis Pigmentosa.—The state of the peripheral vision in retinitis pigmentosa is so characteristic as to render an ophthalmoscopic examination almost superfluous. The peculiar features are marked concentric limitation combined with good central vision.

Usually the objective appearances are also sufficiently striking to leave no doubt as to the nature of the case. In some instances, however, where there is an entire or almost entire absence of pigment, the subjective examination is of value in confirming the diagnosis. The extreme periphery of the retina does not appear to be subject in the same degree to the degenerative changes which constitute this disease, and we consequently find that, whilst the function of the greater part of the retina is lost, a zone or belt, or it may be only a small temporal portion, retains a part of its light. Fig. 4 represents the field of the left eye in a case which had existed from early childhood in probably pretty much the same condition. V $\frac{20}{40}$; J. 1 at 6″; M 3, 0.

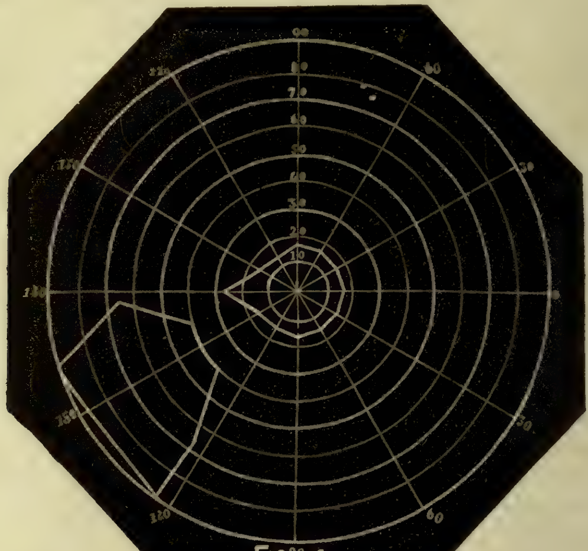

FIG 4

Curiously enough, this patient was completely colour-blind for red and green. There can be little doubt that this was congenital, as in other cases I have invariably found the colour vision normal. If the exploration of the field in retinitis pigmentosa be merely undertaken with reference to its continuity and extent, whilst the relative activity in the functions of different parts is disregarded, it will be found that there is a great want of correspondence between the results arrived at at different times, unless great care be taken that the conditions are as nearly as possible similar at each examination. The state of the peripheral vision is very markedly dependent on the intensity of light, a fact which is well known in connexion with the most prominent symptom of the disease, viz., night-blindness (hemaralopia).

Embolism.—A loss of half the field, or a sector-shaped defect in it, *limited, however, to the one eye*, occurs in embolism of one of the principal branches of the central artery of the retina. The defect is generally in the upper or lower half of the field. This condition is not infrequently wrongly called hemianopsia superior or inferior. After embolism of the main artery a small peripheral portion of the temporal side of the field retains often more or less completely its function, a fact which it is well to bear in mind, as the ophthalmoscopic appearances, after a certain time has elapsed, are often slight and undecided ; and this condition occurring on the one side, especially in a subject the state of whose circulatory system would render embolism possible, is strongly suggestive of the blindness being due to this cause.

Scotomata occur either in connexion with lesions of the retinal elements or independently of gross anatomical alterations, generally owing to some functional intra-cranial or cerebral disorder. The first may be of traumatic, inflammatory, or vasomotor origin, or be due to malformation. The cause is generally evident on ophthalmoscopic examination. The affected regions give rise to positive scotomata, of which the patient is most conscious when the centre is affected. This form is found in the different kinds of choroiditis, traumata, and hæmorrhages of the retina and choroid, opaque nerve fibres, coloboma, retinitis, etc. In diffuse retinitis a zonular or ring-shaped scotoma may often be found, either complete or interrupted at intervals, without any corresponding ophthalmoscopic changes. A form of choroiditis occurs in old people which is limited to the region of the macula lutea, and is often not very easily detected owing to the exudation, or senile changes of the basal membrane, differing only slightly in colour from the rest of the fundus. It gives rise to very different degrees of blindness, generally sufficient, however, to render the reading of newspaper type impossible. Owing to the limitation of the pathological change to the centre, complete blindness never results from it. Large or small insular scotomata not implicating the centre or extending to the periphery, for which no objective reason can be detected, are occasionally met with. The origin of these is obscure. The prognosis is good as far as blindness goes if the function of the surrounding portions of the retina remains normal, but the scotomata are not likely to disappear. Fig. 5 is the field of the left eye of a lady aged 40, in whom there were no ophthalmoscopic appearances or any history of exposure to strong light. The condition remained unaltered for several months, after which I did not see her again. The right eye was normal.

Glaucoma.—In this disease Von Græfe showed long ago that the condition of the field afforded an indication of primary diagnostic importance. The limitation which takes place is usually most marked to the nasal side (inwards and downwards).[1] Frequently this part of the field is destroyed to close up to the point of fixation when the rest remains as yet but slightly constricted and the vision of the centre tolerably good. It is interesting to observe the effect of iridectomy on the glaucoma field of vision. If the disease has been acute, the operation is generally followed by widening, sometimes to a very considerable extent. This is also in some degree the case in chronic cases when the measurement of the field before operation has been made at a time when there has been considerable increase of tension, under which condition part of the limitation may be due more to a temporary abolition than to an irretrievable destruction of the local functional activity. In most chronic cases, however, and always in the true glaucoma simplex, there is cause for congratulation if the extent and acuity of the eccentric vision remains unaltered. Often the restriction becomes slightly greater, a result generally unimportant when compared to the chance of arresting the progress of destruction, but which occasionally—viz., when the restriction has at one part been close up to the point of fixation—may, by involving the centre, make all the difference between tolerably useful sight and an amount which is barely sufficient to enable the patient to move about without assistance. According to Treitel, the boundaries of the eccentric colour vision are restricted only to the same relative extent as for black and white. Undoubtedly such is often the case, and, as will be seen further on, this is entirely different from the condition in optic atrophy, so that if it be constant it would obviously afford an indication of some diagnostic importance in that class of cases in

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[1] On this point Mauthner holds a different view. See his recent work on glaucoma.

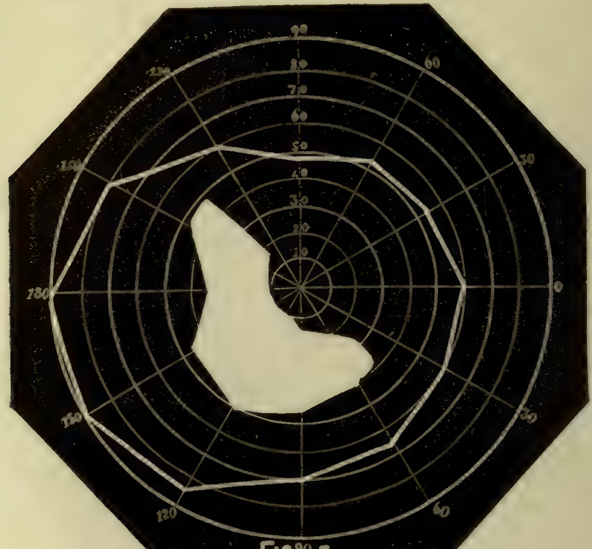

FIG 5

which the diagnosis between glaucoma simplex and atrophy is not without difficulty.

Hemianopsia.[1]—Symmetrical defects in the field suggest lesion in the optic nerve tracts or centres. If the defects lie to the same side in both eyes—that is, inwards in one and outwards in the other—we have the condition for which the term *hemianopsia homonyma* is now generally restricted. The hemianopsia may be to the right or left (hem. homon. dextra v. sinistra) and partial or complete, just as we have complete and partial right or left hemiplegia. It may or may not be associated with hemiplegia. In the cases I have seen it has more often existed alone, but it is probable that the cases in which the visual paralysis forms but a part of the whole lesion will be more frequently met with in general hospitals. Of 29 cases given by Schweigger,[2] hemiplegia was absent in 16 and present in 13, though in most of these it was only slight and transitory. If the case be recent and uncomplicated, there is no appearance of atrophy of the nerves. The boundary separating the blind and seeing portions of the field is usually sharp and regular; when the hemianopsia is complete it is a line coinciding (for the peripheral portions of the field, at any rate) nearly, if not exactly, with the vertical through the point of fixation. Whether or not it also passes vertically through this point, indicating an interruption in the functional activity of exactly half the macula lutea, is still a disputed point. Possibly in some cases it does so, and in others not. I have invariably found the immediate neighbourhood of the point of fixation (from 2°–5°) apparently not implicated, but this may possibly be owing to the difficulty of securing accurate fixation, as some have suggested.[3] Yet I am

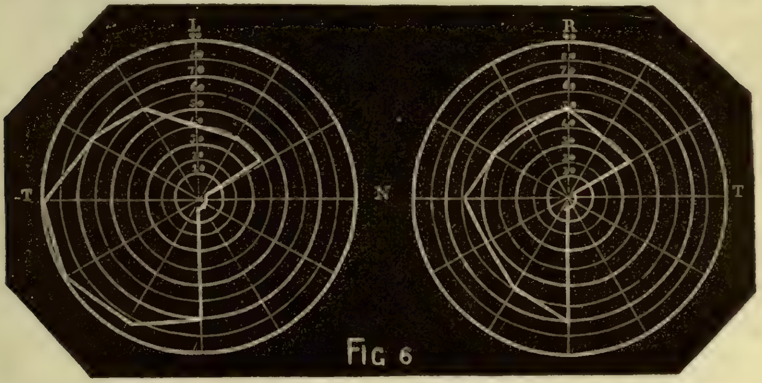

FIG 6

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[1] The term hemianopsia (ἡμι, ἀ, ὤψ), first suggested by Hirschberg, and now adopted by most writers, is obviously more consistent with the general terminology of nervous affections than the original hemiopia.

[2] Græfe's *Archiv*, xxii. part 3.

[3] On this point see Mauthner, *Hirn und Auge*, No. 5 of his excellent series of lectures on ophthalmological subjects.

inclined to think that the two cases actually do exist, more especially as the lesion causing the hemianopsia may have, theoretically, three situations, viz., the optic tract, the optic thalamus and its neighbourhood, and the cortex cerebri somewhere behind the fissure of Rolando (the angular gyrus, according to Ferrier[1]). Lesions occupying the two former sites, and giving rise to hemianopsia, have been actually demonstrated.[2]

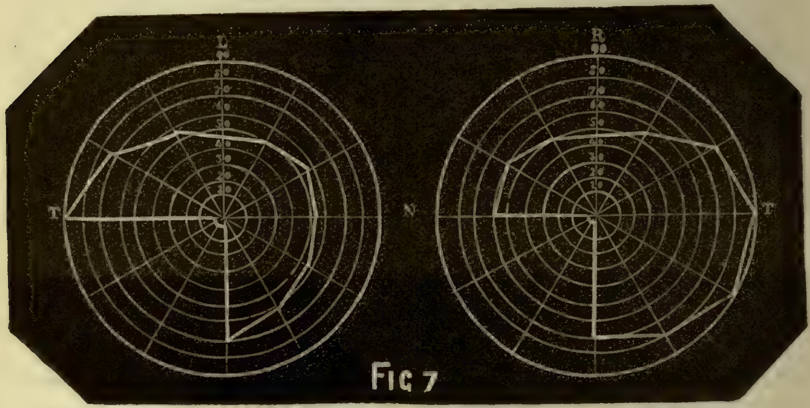

FIG 7

When the hemianopsia is partial, the defect is generally, though not always, of equal extent in both eyes. Fig. 6 is the field in the case of Wm. C., aged 37, under Mr Tay's care at Moorfields (1st July 1880). Duration, according to his own statement, 5 months, but history of partial hemiplegia 1½ years ago. Right leg drags; tendon reflex normal; V fully $\frac{20}{20}$; colour perception normal.

Fig. 7 is from a case under the care of Dr Barlow at the London Hospital, in which the defect was limited exactly to the left lower quadrant. There was defective smell, $V = \frac{30}{20}$, and red-green blindness (in all probability congenital).

In Fig. 8 the hemianopsia is not quite symmetrical. The field is from the case of a soldier, aged 32, under Mr Couper's care at Moorfields (9th May 1880). Duration 1½ years; came on with right hemiplegia, which had disappeared; $V > \frac{20}{20}$; colour vision normal.

Occasionally the vision of the one side, or of a portion of the one side, is not completely abolished, but merely more or less defective. It is probable that such abortive forms of hemianopsia may exist in all degrees of incompleteness, and would be found to be much more frequent than is usually supposed if perimetric explorations of the field of vision were more generally made amongst the

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[1] *Functions of the Brain*, p. 164.

[2] Hirschberg, Virchow's *Archiv*, vol. lxv. p. 118; and Forster, Græfe-Saemisch, vol. vii. chap. 13, p. 118.

"nervous cases" in general hospitals and asylums. The following case was accidentally discovered amongst the patients in Hansen's

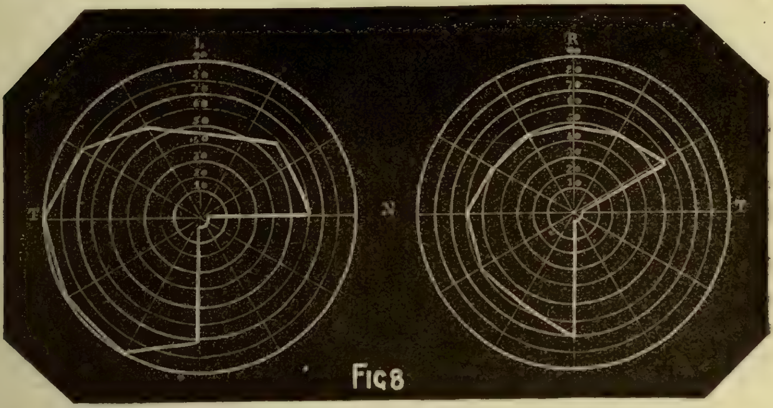

FIG 8

clinic, and is described by Bjerrum:[1]—The case was one of *acquired complete colour-blindness for all colours occurring in a typical left hemianopic form.* The central vision and remaining portion of the field were altogether normal. Excentric vision did not appear to have suffered to an appreciable extent. The white object used for testing appeared only very slightly duller to the left side. Fingers were counted excentrically just as well on the left as on the right side. The patient remarked spontaneously, after the examination, "That is curious; I seem to have got a sort of colour-blindness,"—showing clearly how slight the excentric amblyopia must have been.

Hemianopsia remains, as a rule, stationary, even although the subjective symptoms become in many cases, after some time, associated with more or less visible changes in the discs. According to Mauthner, the most marked atrophic discoloration is found in the eye of the side to which the field is restricted. This point requires, however, further confirmation.

Hemianopsia may, on the other hand, be complicated with complete optic atrophy of the one eye. The following case (Fig. 9) was probably of that nature:—Henry C., aged 19, has distinct atrophy of the right optic nerve, with complete blindness. The vision of the left = $\frac{20}{70}$ and J. 1 at 5″–6″. Field as in Fig., *i.e.*, vision entirely absent to the outer side; colour vision not defective; pupils respond well to light falling on the left eye; ophthalmoscopically considerable paleness, but no apparent diminution in the arteries or veins. *General Condition.* — Complains of great sleepiness and headache. Is subject to vomiting in the morning. Sometimes feels as if "going silly." Tendon reflex normal. This patient first attended at Moorfields in

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[1] *Hospitals Tidende,* R. 2, Bd. 8, p. 41.

February 1879. At that time he believed his vision to have been failing for six months. Unfortunately, there is no further record on his paper than that the V was J. 16. According to his own statement, the left was also affected at the time. I first saw him on 10th June 1880, and last on 2nd September of the same year, during which time absolutely no change whatever took place in the vision of the left eye. This length of time is, of course, too short to justify the conclusion that the condition would probably remain permanently stationary; but as the patient has changed his address and could not be heard of, I have been unable to ascertain the present state.

A very unusual form of hemianopsia is described by Forster in his chapter on the relation of ocular and visual disorders to general disease, which forms one of the most interesting and novel features of the well-known Græfe-Sæmisch *Handbuch* (vol. vii. chap. 13). In this form the defect is limited to corresponding insular portions in the homonymous halves of the two visual fields. Fig. 10 represents the field in one of Forster's cases, a man aged 58. The condition was found to be the same a year after the first examination.

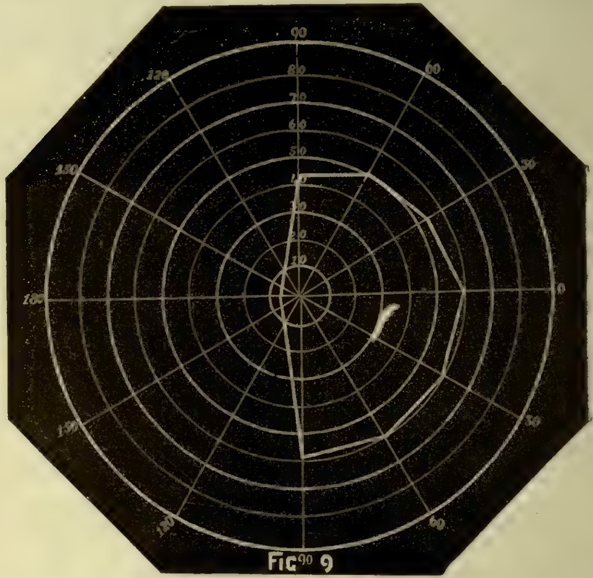

FIG 9

Two other forms of hemianopsia have been observed, viz., temporal and nasal hemianopsia. In the former the outer and in the latter the inner half of each field of vision is deficient. They are both exceedingly rare. All the cases to be found in ophthalmological literature (23 temporal and 11 nasal), some of which there is good reason to regard as doubtful, have been recently referred to by Mauthner.[1] Since then two more have been added to the list of temporal hemianopsias.[2]

Optic Atrophy.—Except where there is marked diminution in the size of the vessels of the retina, it would be rash to come to any conclusion as to the existence of optic atrophy from the mere ophthalmoscopic appearance of the papilla, as the physiological limits of colour and excavation are extremely wide. Along with a low degree of central visual acuity, an excessive paleness of the nerve is certainly suspicious; but there are many circumstances under which those two conditions exist, either mutually dependent or not, unconnected altogether with atrophy,—for instance, all those which give rise to a central negative scotoma. For a safe diagnostic as well as prognostic criterion we are thrown back upon the determination of the state of the field of vision. Our knowledge on this subject was first clearly formulated by V. Græfe,[3] and, indeed, so thoroughly was this subject investigated by him, that, with the exception of the slight refinement which has been introduced by the examination of the peripheral colour vision, little or no advance has since been made. One of the most important points which resulted from his observations was, that however much the central vision might be diminished, no fear of progressive atrophy, and therefore eventual total blindness, need be entertained if the boundaries of the field of vision remain normal. In progressive atrophy there is *invariably* a limitation of the field. The limitation often takes place all round (concentric limitation), but in other cases the field in one direction is more restricted than in the rest. The restriction which is taking place can frequently be most easily demonstrated for colours. This is, very probably, simply because, if the examination be made in ordinary daylight, the corresponding failure of the light and form senses may, if slight,

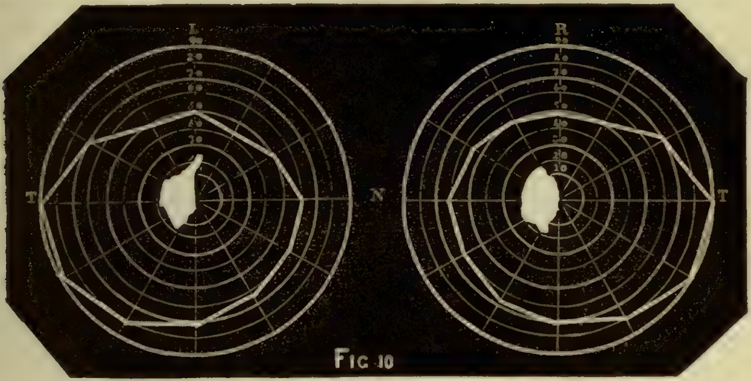

FIG 10

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[1] *Loc. cit.*

[2] Treitel, Græfe's *Archiv*, vol. xxv.; Gowers, in a communication to a recent meeting of the Ophthalmological Society.

[3] *Klinische Monatsbl. f. Augenh.*, 1865, and *Archiv*, vol. ii.

more readily escape detection. There does not appear to be any reason for supposing that the failure of the colour perception is unconnected with that of the other functions of the visual apparatus. Though, considering the number of possible seats as well as natures of the lesions which would disturb the functions of the optic nerve, the possibility of such an independence should be borne in mind. Before, however, we are able to form correct conclusions on the nature of the colour failure in cases of optic atrophy, it would be necessary to have more ample data of the normal relations connecting the three senses of light, form, and colour. It is certain that they are all different functions of the special sense of vision, but in how far mutually dependent remains to be shown by future investigation. Although it is most common to find, in cases of optic atrophy, that the failure of the functions of the central and peripheral portions of the retina advance hand in hand, still cases are met with in which the peripheral functions have suffered much more severely than the central. The long time which sometimes elapses between the beginning of atrophy and complete blindness renders it difficult to give a favourable prognosis based on an apparent arrest in the progress of the amblyopia; but if the condition of the field of vision remain absolutely stationary for several months, the prognosis is certainly hopeful, and all the more so if the cause of the atrophy appears to be at an end. Cases occur in which, after the disease has produced a considerable amount of amblyopia along with great limitation of the field, it ceases, and the patient retains what is left.

It is impossible from the functional examination to determine whether the atrophy is connected with spinal or cerebral disease, or due to some other cause (hæmorrhage, primary sclerosis of the optic nerve, etc.), but there are other circumstances which render one or other cause the most probable in any case. In the great majority of cases of spinal atrophy some ataxic symptoms are already present when the amblyopia begins, whereas it is otherwise with the atrophy of cerebral origin, which is seldom preceded, though often followed, by mental disturbances. In cases of atrophy there is generally a considerable difference in the amblyopia of the two eyes. It is not uncommon to find the one far advanced towards amaurosis whilst the vision is still very fair in the other. The mode of development of the amblyopia is, nevertheless, generally much the same in both. Thus, if any particular portion of the field is most restricted in the one, the first symptoms may be looked for in the corresponding part of the field of the other eye.

The characteristic subjective symptoms of optic atrophy are, then, more or less concentric limitation of the field of vision, which is greatly more pronounced for colour, with a simultaneous diminution of the central visual acuity. There is no constant relation between the amount of failure of peripheral and central vision, although a large proportion of cases present pretty much the same conditions. Schweigger, Treitel, and others have described a few cases in which the central vision remained for a long period tolerably normal although the restriction of the field was extreme. Such small fields with good central vision are, as we have seen, more characteristic of retinitis pigmentosa, but the possibility of their occurring in progressive atrophy should be remembered. A case which was met with at Moorfields, for the notes on which I am indebted to Dr Charnley, appears to belong to this category, though there are points about it which render another explanation possible. R. B., aged 37, farmer, has for twelve months suffered from giddiness and tremors. V $\frac{20}{30}$ R, $\frac{20}{70}$ L. Field of vision of both eyes restricted to such an extent that there appears to be hardly anything but central vision left. Colour vision normal; eyeballs in constant motion. The present condition appears to have come on pretty suddenly, and has lasted for six months. Ophthalmoscopically the fundus appeared perfectly normal.

Owing to the short duration of this condition, and from the fact that the colour vision remained normal, and that the visual acuity was found several months after to be unaltered, it seems to me not impossible that this case may be one of double hemianopsia, in which the centre has each time escaped.

Central negative scotomata are met with in a class of cases which are almost always, though probably not exclusively, of toxic origin. The scotoma, which may be so slight as only to be readily demonstrated for colours, takes the form of a horizontal oval, stretching from the portion of the field corresponding to the position of entrance of the optic nerve to slightly beyond the point of fixation. The condition is accompanied by a diminution of central visual acuity of very varying amount. In by far the greatest number of cases—and in such the prognosis is extremely favourable if the cause of the amblyopia be removed—no other defect of the field of vision exists, but a typical central negative scotoma may be com-

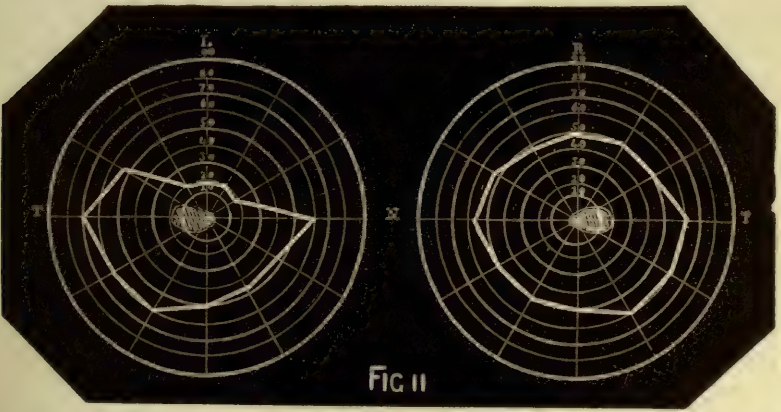


FIG 11

plicated in rare cases by other limitations. In these it is doubtful whether complete recovery is ever possible, and, indeed, it is not impossible that they may ultimately lead to complete blindness. Fig. 11 gives the field in a case of the complicated form.

The vision of the right eye in this case improved during treatment from $\frac{15}{200}$ to $\frac{10}{100}$; that of the left remained stationary at $\frac{8}{200}$. The ophthalmoscopic changes were slight.

From the preceding short sketch of the state of peripheral vision in different diseases it is evident that there are many points of diagnostic importance to be gathered from an examination of the field. This, in the case of the diagnosis between intra-ocular and extra-ocular cause, which, so far as our present knowledge goes, is the direction in which the observed differences are most pronounced, is not so necessary, as there are, as a rule, objective signs which lead us to the same conclusions. But there can be little doubt that in the thorough examination of the relative as well as absolute functional activity of all parts of the retina we possess a means which, when further developed, will prove of immense power in the localization of intra-cranial disease. When we have been able to bring together the results of post-mortem examination with the variations observed during life in the exact nature of the defect for light, colour, and form, it would be strange indeed if such an examination were not more productive of diagnostic refinement than the objective examination of a neuritis or atrophy of the optic nerve taken alone. But it is not merely as a method of diagnosis that this examination deserves attention; in many cases it affords the most delicate means of ascertaining the course taken by any disease, especially when of intra-cranial origin. Here, however, it is necessary to bear in mind the circumstances which have been already mentioned as influencing the result of the examination, viz., intensity of light, practice, etc., so as not to ascribe without good cause slight or sometimes even considerable alterations in these results to progress of the disease either in the direction of recovery or blindness.

The prognostic importance attaching to the state of the field has been alluded to under the different affections, but it may be well to recall a few points here. The prognosis is good if there be diminution of central vision without any limitation of the field, or if the limitation takes the form of hemianopsia in which the portions affected are *sharply* separated from those in which the function is retained. If, on the other hand, there be limitation of the field, even without any apparent cause, the probability of subsequent atrophy and blindness is very great, and is all but certain if there be a previous atrophy of one eye. A good deal of prognostic significance, however, attaches to the time which elapses for the production of a defect in the field. Generally speaking, the limitations which come on suddenly are not so liable to end in atrophy as those of slow, gradual invasion; but here again we must keep in view the known or probable nature of the central cause, as it is evident, for example, that any sudden alteration appearing after a lesion of traumatic, apoplectic, or even embolic origin would necessitate a more serious prognosis than a similar change owing its existence probably to vasomotor, hysterical, reflex, or other more or less obscure functional disorders.

In conclusion, I need hardly say that it has not been my intention in the preceding pages to enter into an exhaustive discussion of the pathological changes which occur in peripheral vision, but merely to point out to many who are engaged in general practice, and more especially to those who have so eagerly embraced the ophthalmoscope as an aid to diagnosis, that they have besides, in the subjective examination of the field of vision, a means which has not only been productive of great results already, but is capable of much further development. I am indebted to Dr Edmund Hansen of Copenhagen for calling my attention to many points in connexion with this subject, and I would take this opportunity of thanking him for the uniform kindness with which he has always placed the results of his extensive experience at my disposal.

ARTICLE II.—*Medical Notes from Ceylon.* By J. STEVENSON, M.B., L.R.C.S. Edin., Surgeon, Army Medical Department, Ceylon.

Areca Nut Fibre as a Surgical Dressing. — In going over the civil hospital at Point de Galle, I was shown a fibrous vegetable material, like oakum in appearance, but softer, obtained from the husk covering the areca nut (the fibrous mesocarp of the fruit). This is found to be a most useful and cheap antiseptic dressing for wounds when it is permeated with the usual mixture for rendering tow and oakum antiseptic. The material is obtained by beating the husk on stones, and can be obtained of almost any degree of softness, according to the amount of labour expended on it. It possesses the advantage of cheapness, being a substance which is otherwise thrown away; it is powerfully absorbent, and can be most easily rendered antiseptic by soaking with a mixture of carbolic acid one part, country resin (a grayish-white resinous powder, called by the Singhalese dummula) one part, kerosine oil four parts. I was informed by Dr Vanderschmaght, resident medical officer, Native Hospital, that this dressing was introduced two years ago by Dr Anthonisz, the then colonial surgeon, Southern Province of Ceylon. I have not previously met with any notice of this useful application of what is a useless product. Its value must be obvious to those who have the care of hospitals in the tropics where the areca nut palm abounds.

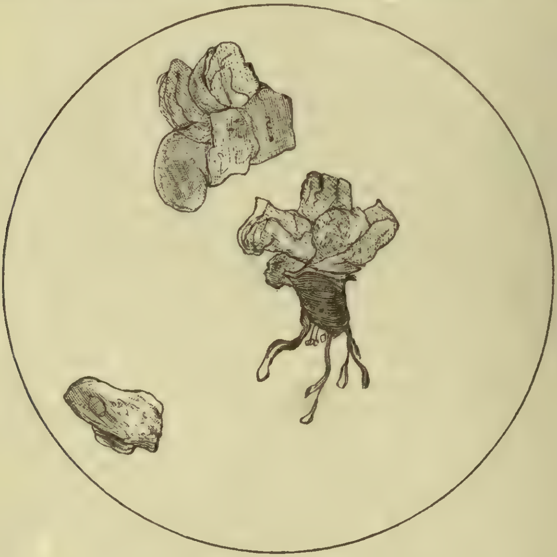
Erythema Solare.—The power of the direct rays of a mid-day tropical sun was well illustrated by a case which recently occurred among the British troops stationed here. Private B., 102nd Royal Madras Fusiliers, got partially intoxicated from arrack. He plunged into the sea during the forenoon of June 23rd last, swam several hundred yards, during which his naked shoulders were exposed to the sun for two or three hours. Next day both shoulders and back exhibited signs of active hyperæmia; the skin was bright red, tender, became pale on pressure, and was so much infiltrated that it pitted on being pressed with the finger-point. There was not inflammation, as the injury was not followed by desquamation of the cuticle.

Mosquito Bite.—The following observations on the bite of the stinging gnat, so common and troublesome in the tropics and warm countries generally, may be of interest. The degree of pain, redness, and swelling which follows the bite of a mosquito will depend on the situation. The insect alights, feels about with its proboscis. If the surface is covered with cloth, no attempt is made to puncture, and it flies off; but this is not always the case. I have seen those who have been severely stung while the skin was covered with a thin cloth material. When it feels sure it is on the skin, the suctorial proboscis, which in the diptera consists of a tubular labium enclosing the other parts of the mouth, and is placed on the under surface of the head, is slowly and steadily pushed perpendicularly into the tissues, the head of the insect bending down as it penetrates. After thirty or forty seconds, during which the insect grows a little larger, it is as slowly withdrawn, and the satiated pest flies off. A slight sharp prick is felt during insertion, and the itchy smarting and redness, so characteristic and annoying, begins at once, so that in five minutes from the infliction of the bite a red areola, 2 centimetres in diameter, with a pale centre, has formed. Little swelling occurs at first, but after twenty to twenty-four hours this is most apparent. If the bite has been surrounded by a ring of ink, it will now be observed to be a hard red nodule, attended with a sensation of pain and itching. If the nodule be now rubbed, it will be found hard, and to feel very like a minute lead pellet under the skin. If the rubbing be forcible, and continued some little time, there results an aggravation of the peculiar pain which is so characteristic of mosquito-bite, and which prompts one to scratch the part, thus increasing the annoyance. If the bite be left undisturbed,—and this requires some resolution,—the pain is really not great nor the itching very severe; there is commonly just enough to let you know you have been bitten. Thirty-six hours afterwards all pain and itching have disappeared. If even now, however, the spot be rubbed, both may be revived in a troublesome degree. The swelling, which is still hard and red, is now falling, but the redness is not so vivid or extensive. In seventy-two hours the site of the sting is just visible as a brown-red point. Rubbing it will not now cause pain or itching. The hardness is almost gone, but is large enough to mark the site of the injury. The swelling had not quite disappeared till ninety-six hours had elapsed, when a faintly-marked red point could still be distinguished. These observations may be regarded as indicating the changes following a severe mosquito-bite; but I have observed that the stings of different insects in the same person are followed by different degrees of irritation, so that there are probably different degrees of acridity in the juices passing into the tissues. That these are of a highly irritant kind is proved by the intensity and long continuance of the inflammatory process, and also by the fact that in most cases minute extravasations occur during its course. Many mosquitoes, when crushed, are full of blood. As a protection against mosquito-bite, the natives smear the skin with lime-juice. After bathing this is said to be very effectual. Various remedies have been recommended, either as prophylactics or as affording relief, such as cocoa-nut oil, carbolic oil, solution of ammonia, etc., but the application I have found most effectual is to smear the hands, where bitten, with a moist cake of soap, and allow the thin lather to dry into the skin. I have frequently been obliged to resort to this for relief, and have found that all itching and pain had disappeared in ten or twelve minutes after the application was made, and did not again return. Besides being effectual, it has the advantage of being always at hand and easy to use.

New Coffee as a Cause of Diarrhœa.—Although coffee is grown in the higher parts of Ceylon, and exported in quantity to various parts of the world, it is matter of experience to those living in the island that good coffee is difficult to procure. It is quite impossible, for example, to buy a pound of coffee and chicory, such as may be bought in London at 1s. 6d., or such as would make an agreeable beverage in a short time. The article generally sold retail as coffee is an inferior kind of green native coffee. Before this can be used as a diet drink it must be roasted and ground. I do not recollect ever to have seen it mixed with chicory. As the precautions and care necessary to obtain proper coffee from the raw material are not often understood by natives, and are still more frequently neglected, the chances of getting a good cup of coffee in Ceylon are indeed small. It is a fact well known to coffee-planters, and also to a few others, that coffee, if used before it is a few months old, will cause diarrhœa. The writer was not aware of this fact until he discovered it by experience. Four teaspoonfuls of roasted and ground coffee were used to prepare two breakfast cupfuls. The ingestion of this was followed by rapid pulse, 80 per minute, and violent diarrhœa. The motions, consisting of brown feculence, were attended by little or no griping. On ceasing to take coffee, the diarrhœa and uneasy feeling at the epigastrium left. The symptoms appeared every day when *new* coffee was taken. The bowels were moved nine times in twenty-four hours. In swallowing the coffee it was noticed to be rather acrid. To all appearance the coffee looked well roasted and ground, but had very little flavour, and by no means a strong smell of the peculiar volatile aromatic principle which resides in well-roasted, good coffee. With a view to ascertain approximately the number of men, all living under similar conditions as to exercise, food, etc., who might be thus affected by coffee, inquiry was instituted amongst the men of the Royal Artillery stationed here. It was then found that out of thirty-three men sixteen declared they *could not drink* the morning coffee, and the reason alleged by most of the sixteen was that they liked coffee, but that it caused looseness, and they could not drink it. Coffee-planters with whom I have come in contact agree in describing coffee of less age than six months as unwholesome. It is said to be about six months before coffee grown on the estates here can reach the retailers at home.

Young Cocoa-Nut.—This fruit, at an early period of its growth, contains a large quantity of fluid. A thin, translucent, gelatinous flesh lines the interior of the nut. In this condition it is largely used by the natives as an article of food and drink, and great numbers of nuts are thus consumed, since the price they fetch is quite as good as it would have been if allowed to remain till matured. At every street corner may be seen the seller of what the natives call kouroumbà (young cocoa-nut). The average quantity of fluid contained in one nut is 17½ fluid ounces, but there may be as much as 30 ounces. I have found the mean specific gravity to be 1020; it varies according to the age. In the young nuts, when there is very little flesh, the fluid is rich in chlorides. In one specimen I found 268·63 grains of sodium chloride per gallon. The reaction is decidedly acid to test-paper, and the fluid almost quite transparent. As it grows older it becomes sweeter, and the salt taste is less marked; there is also greater milkiness from more vigorous cell-growth. The taste of the fluid is sweetish salt, with a faintly nutty flavour. An imperial pint acts as a gentle laxative. From the obvious fact that cell-growth is going forward at a rapid pace in the liquid, it might be conjectured that it would be readily assimilated by the digestive organs. I have given it in two cases of dyspepsia, the result of functional derangement or debility of the digestive organs, in Europeans, and its use was followed by marked improvement in the general health and increase of the body weight. In one case three pounds were gained in a month, and in the other there was a clear gain of four pounds in twenty-eight days. In each case the weight was ascertained to be stationary or decreasing previously. It was also given in a case of chronic catarrhal pneumonia as a drink instead of water. Here also it seemed to aid the medicinal treatment, for the patient, although much emaciated and suffering from violent cough, profuse muco-purulent expectoration, night-sweats, and moderate fever, recovered. Many Europeans use the young cocoa-nut in the morning if it can be easily had. It is some time before its taste is relished. Many soon come to like it; others can never acquire the liking. This plant, in addition to its many other uses, thus yields an abundant supply of a very wholesome beverage which is beyond the suspicion of filth-contamination, no unimportant matter where the sun is hot and shallow wells exist, often in close proximity to foul cess-pits in a porous soil, and filth-contaminated water is the rule instead of the exception.

Herpes Circinatus.—This parasitic affection of the skin, to which the terms Indian ringworm, dhobie's itch, and tropical skin fungus are also applied, is very common amongst the natives and Europeans here. One is unusually fortunate if he lives twelve months in Ceylon without experiencing at least one attack. The term dhobie's itch is perhaps that most commonly used amongst Europeans, who give the dhobie, or washerman, the credit of having conveyed it to them. This belief is probably correct, since it is known the former are in the habit of washing their own clothes in the same water and in the same vessels as those in which they wash for their employers. It is also, no doubt, frequently derived directly from the skin of the native, as he wears, and even lends out, underclothing given him to wash. That the disease is spread by washing clothes of those who have it along with others I have seen proved in a very conclusive manner. Thus, while doing duty with the headquarters of the Royal Madras Fusiliers on a voyage in H.M.S. "Euphrates" between Ceylon and Natal, the regiment having been ordered to proceed on active service, I had an opportunity of observing one of the ways in which H. circinatus is communicated from one person to another. The regiment left Colombo on March 13, reaching Durban on the 29th. Peace having been concluded just before our arrival, we were ordered to return to Ceylon. The troopship therefore left Durban on April 8, 1881, and returned to Colombo on the 28th. The men were thus nearly seven weeks at sea without once landing. As this disease rarely incapacitates a man from military duty, and is not unfrequently so slight as to escape notice altogether, it is only in the most aggravated and long-standing cases that the men apply for treatment. There were seven cases amongst the men on embarkation, but none amongst the officers. We had scarce been ten days at sea when several of the officers became affected with it. It is usual for officers and men in the British army, while serving in tropical countries, to wear white clothing, which is frequently washed. During the first ten days of the voyage,—that is, until the vessel had got pretty well south of the equator,—the officers' soldier-servants washed their masters' white clothing in the same vessels, and even in the same water, in some cases, in which the white uniform of the men had been washed, with the result that the disease appeared amongst the officers, and several cases came under treatment. When it became cold enough to wear the ordinary uniform, there were no more cases till, on the return voyage, we were nearing the line, and it was again uncomfortable to wear thick clothing. Now again a few cases were observed and treated amongst the officers. It was ascertained that there was not a solitary case amongst the ship's crew or marines, but they did not use the same vessels for washing clothes, etc., as the soldiers used. These facts enable us to conclude that this is one of the means by which ringworm spreads from person to person; no doubt there are others. Perhaps the fact that the mass of natives, in this country, at all events, go about with the upper part of the body bare, and thus frequently bring the unprotected skin in contact with the hides of animals, such as horses and cows, which are said to communicate the disease to man, may in a great measure account for the frequency of the ringworm. Amongst them I also think the activity of the cutaneous system and consequent vascularity induced by residence in a tropical climate has a great share in rendering the disease easily transplanted from one to another, and from place to place on the same individual, and also in giving it the chronic character it so frequently presents. The accompanying drawing of the fungus of dhobie's itch was obtained by scraping the skin of the affected part with a sharp scalpel; it represents the top of a papilla of the cutis, with a mould-like fungus growing from the apex, and epidermal scales adhering to the sides and base. I have examined many specimens without being able to find anything so definite as this. When the part is scraped and examined microscopically, all that can be as a rule observed is, masses of scales of epidermis with filaments or mycelium interlacing, and numerous spore-cases and spores, some of the former with part of the stalk attached.



Fungus from a Case of Indian Ringworm. × 300.

Symptoms.—It begins as a small red spot the size of a three-penny or sixpenny piece. There is little itching at first, so that it is sometimes seen before being felt. It commonly begins between the buttocks, on the inner side of the thighs, at the side of the scrotum, or in the armpits. I have seen it appear first, also, on the arm, point of the elbow, and side of the abdomen. If situated on the pubis, near the anus, or in the axilla, it causes almost from the first an acute, slightly painful, itching sensation, causing the patient to scratch or rub the part, often involuntarily; and it has appeared to me that the hotter the weather the greater the degree of irritation. The patch of diseased skin, of whatever size, is slightly raised, of a dark or coppery red colour. In a few days it has become larger, distinctly circular in form, with a paler centre. If not interfered with, it soon spreads to other parts of the skin and causes much more annoyance. The size of each patch depends on the length of time it has existed. Thus from being a mere point it will increase to a circle 2 inches in diameter in four days, but it does not go on increasing so rapidly in all cases. I have seen a case of thirteen months' duration where the space covered by it was 3 × 5 inches. The breadth of the circular line of diseased skin in a well-marked case is about ¼ inch, the red surface being covered with small tubercles, papules, or vesicles, which sometimes exude a small quantity of sero-purulent discharge. The latter is only observed in cases of some duration, and stains the linen. It is the result of a more intense superficial dermatitis, and is accompanied by a greater degree of infiltration and hardening. In the centre the skin is paler than normal, and the hair follicles do not seem to be affected; but I have in many cases noticed that there remains a very perceptible pigmentation resembling cloasma uterinum, which does not fade for weeks, and even months, after the disease has disappeared. The discharge is never abundant, and most frequently the appearance presented is that of a dry, slightly elevated, red circle, throwing off much dry scarf skin; and this is accompanied with great irritation, increased at night, and preventing sleep.

Diagnosis.—According to Dr J. Startin, it is liable to be mistaken for gyrate psoriasis, eczema, syphiloderms, intertrigo, and pruritus.

Treatment.—The following remedies are all capable of curing the disease more or less quickly:—Oleate of mercury (20 per cent.), liq. carbonis detergens, Goa powder, iodine. The two last are perhaps the most frequently used and effectual. Carbolic oil (1 in 8) gives great relief if rubbed into the part, but will *not cure* the disease. Tincture of iodine will eradicate the fungus in recent cases, and cause great improvement in chronic ones; but the liniment of iodine may be relied on as an effectual remedy in the most obstinate cases. I have cured a case of over a year's duration with three applications of the liniment, when both the tincture and salicylic acid had failed.

Stinging Caterpillars.—According to Sir J. E. Tennant,[1] there are two species of caterpillars which are capable of stinging, the ordinary green and black striped hairy grub, which feeds on the suriya tree (*Hobiscus populneus*), and "another which feeds on the jasmine-flowering carissa." The latter "is of a pale green colour, and with fleshy spines on the upper surface, each of which seems to be charged with a venom that occasions acute suffering. The moth which this caterpillar produces, *Neræa lepida* (Cramer), *Limacodes graciosa* (Westw.), has dark-brown wings, the primary traversed by a broad green band. It is common to the western side of Ceylon." It is only of the former that I can write, not having seen either the latter or the sting it inflicts. Several times each year the suriya trees, which are very abundant in and around towns and dwelling-houses in the lower parts of the island, are found covered with a small green and black striped caterpillar from 1 to 1½ inches long. Some years they are more abundant than others. After a time they lower themselves to the ground by threads, and a large tree may be seen with many of those grubs suspended from it. On reaching the ground they crawl away to seek a suitable place to spend the pupa state of their existence. If they happen to alight on the unprotected skin of any unfortunate passer or lounger below, they inflict a severe sting when molested. They are often so numerous on the trees surrounding a bungalow, and so troublesome to the inmates, that their wholesale destruction must be undertaken. This is accomplished by shaking them off the trees, collecting, and burning them. I have seen several cases of caterpillar-sting. The skin presents many slightly elevated, round, red patches, varying in size from that of a sixpence to half-a-crown, very like "erythema nodosum" in appearance. They are the seat of great pain and itching, and cause want of sleep for two or three nights. After some days the symptoms subside and the eruption disappears. The natives recommend cocoa-nut oil to be rubbed into the affected part. I have found that the application of a poultice to the most painful part gives great relief. Cases of caterpillar-sting are very frequent here; therefore it is well for a new-comer to be acquainted with the appearance and cause of the injury.

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[1] *Sketches of the Natural History of Ceylon.* By Sir J. E. Tennant. London: 1861. P. 429.

The grub is covered with a number of loosely-set spines and long, light-coloured, silken hairs. If the back be just lightly touched with the point of the finger, a number of these minute, sharp-pointed spines will be found sticking in the skin, and may be extracted with forceps and examined under the microscope. They will be found to be short, hair-like bodies, very sharply pointed at the distal end, and covered at intervals with black tubercles. They may contain some irritating fluid, but the irritation produced by the entrance of such bodies into the skin would be sufficient to account for the symptoms. This caterpillar is stated by Sir J. E. Tennant not to have been identified with any species of moth. I have, however, hatched a few of the moths, and am informed by the Hon. F. M. Mackwood that it is the "*Dreata geminata*" (Walker), a small, light-yellow moth, very common in this part of the world.

ARTICLE III.—*Diseases which Involve the Organ of Hearing.* By P. M'BRIDE, M.D., F.R.C.P.E.

IN the following pages it is proposed to consider the various diseases which exert a specific influence upon the organ of hearing, and the manner in which that influence is manifested.

Naso-pharyngeal catarrh is, as no doubt the reader is aware, a frequent cause of middle-ear disease; but it is not our purpose to discuss this relation further, as deafness is, in the majority of such cases, the symptom complained of.

What is aimed at here is to lay before the reader a *résumé* of what is known with regard to those ear-diseases which are secondary to well-marked or serious conditions, such as are likely to come under the care of a physician rather than of a specialist. As observations on this subject are scattered through the various text-books and journals devoted to otology and medicine, the imperfections and shortcomings of this paper will, I trust, be excused.

PART I.—ACUTE FEBRILE DISEASE.

Measles and Scarlatina.—In both of these exanthems the ear is liable to be attacked. In the former a catarrhal lesion of the middle ear is said to be the more common, although one often meets with chronic middle-ear suppuration dating back from an attack of measles. The catarrh may be confined to the Eustachian tubes, or it may spread towards the tympanum and involve the middle ear, pain not always being present.

According to Wendt, suppuration of the middle ear is the most common complication in scarlet fever, and the symptoms appear either during the existence of the rash or immediately after its cessation. In such cases pain is very violent, accompanied by febrile exacerbations, and sometimes brain symptoms. Burckhardt Merian found that aural symptoms in scarlatina generally appear during the stage of desquamation, and consist of febrile disturbance, chilliness, earache, and deafness, all of which are more or less relieved when a flow of pus has become established. The lymphatics in the neighbourhood of the auricle are, according to the same author, always swollen. Burckhardt Merian is inclined to assume the existence of a diphtheritic process in the tympanum in severe cases. It is still an open question whether the middle ear is attacked by an extension of inflammation from the pharynx, or whether the tympanum is itself a favourite point of attack for the scarlatinal poison.

It is stated that sometimes the temporal bone is primarily attacked without affecting the auditory apparatus proper. Von Troeltsch has observed that otitis externa (inflammation of the lining membrane of the meatus), and suppuration of the membranous labyrinth occasionally occur in scarlet fever.—(*Ref.*, Ziemssen's *Encyc.*, vol. ii.; *Measles and Scarlatina*, by Thomas, pp. 95, 221, 277; *Lehrbuch der Ohrenheilkunde*, by Von Troeltsch, pp. 107, 531; Burckhardt Merian, *Uber Scharlach in seinem Bezichungen zum Gehörorgan;* abstract, *Archiv für Ohrenheilkunde*, xvi. p. 291.

Variola.—According to Wendt, the eruption is often found in the neighbourhood of the faucial opening of the Eustachian tube. The same author made the following observations on the bodies of patients who had died of variola:—

(1.) Pustules are met with only in the cartilaginous meatus, and most frequently near the orifice. They may, however, cause hyperæmia and swelling in the bony portion of the canal.

(2.) The middle ear is normal in only nineteen per cent. of cases. In the remainder he found either a serous exudation, alone or mixed with blood, or an accumulation of mucus, muco-pus, or pus. Moos has found suppurative inflammation of the labyrinth in small-pox patients.—(*Ref.*, Ziemssen's *Encyc.*, vol. ii. p. 361; Curschman *On Small-pox;* Von Troeltsch, *op. cit.*, pp. 107, 381, 385, 531.)

Diphtheria.—This disease may affect the external or middle ear, and probably also the auditory nerve.

(*a.*) Diphtheritic inflammation of the meatus is characterized, according to Gruber, by the formation of a diphtheritic pellicle in the canal, and by the fearful unremitting pain which accompanies it. It is a rare disease, but has been observed by others.

(*b.*) Burnett describes a variety of inflammation which often results from diphtheria as follows:—"In children there is often found, at the termination of an attack of diphtheria, inflammation in the external ear. This rapidly extends, in some cases, directly to the bone of the canal and backwards to the mastoid process. Pain is not a prominent symptom in those inflammations which follow diphtheria, and this fact will readily distinguish them from the truly diphtheritic form of external otitis in which the peculiar false membrane is found in the auditory canal. The form of disease now referred to is one arising from the broken-down condition of the little patient rather than a form of disease already described as the diphtheritic. In the former case the pain is not great, the swelling is considerable, and the tendency to attack bone is marked. Fluctuation is soon felt over the mastoid region, and after the evacuation of pus the bone beneath is felt denuded, and in some cases crumbling. Exuberant granulations spring up around the opening made by the knife in the soft parts, and the peculiar depressed mouth of a sinus leading to dead bone soon begins to make its appearance."

(*c.*) Acute otitis media, which may and often does become chronic, is a common accompaniment of diphtheria. Wendt found that in a large proportion of cases the cartilaginous portion of the Eustachian tube was filled with or lined by a false membrane. In only one case was he able to trace the process to the tympanum.

(*d.*) The occurrence of deafness due to post-diphtheritic paralysis of the auditory nerve is mentioned by writers on practice of medicine, but, so far as I am aware, has not attracted the attention of specialists. I have met with one case which seemed to belong to this category, but am unwilling to dogmatize from a single observation.—(*Ref.*, Gruber, *Lehrbuch der Ohrenheilkunde*, p. 319; Burnett, *On the Ear*, p. 269; Von Troeltsch, *Lehrbuch der Ohrenheilkunde*, p. 263; Bristowe and Flint, *Practice of Medicine.*)

Mumps, according to Hinton, often leaves a permanent deafness, which in all probability is due to disease of the internal ear. —(*Ref.*, Hinton, *Questions of Aural Surgery*, p. 263.)

Typhus.—Hartmann examined a number of patients who were recovering from typhus, and found that, out of 130 cases, 36 had aural lesions, besides six in whom plugs of wax filled the meatus. The lesions were as follows:—

Catarrh of the Eustachian tubes and tympana,	14
Acute otitis media with intact membrane,	4
„ „ with perforation,	9
Increase of previously existing tinnitus and deafness,	3
Return of a healed otorrhœa,	1
Tinnitus without objective signs,	2
Disease of the labyrinth,	3

—(*Ref.*, *Zeitschrift fur Ohrenheilkunde*, viii. p. 209.)

Typhoid Fever.—In this disease the ear seems to be not unfrequently attacked. Liebermeister refers especially to affections of the Eustachian tubes and middle ear as common. Hoffmann met with perforation of the tympanic membrane (the result of middle-ear inflammation) in a considerable number of cases.

According to Schwartze, deafness in the course of typhoid may be due to (1) suppuration of the middle ear; (2) pharyngeal catarrh extending towards the tympanum and involving the Eustachian tubes; or (3) central nervous disorders. Moos has demonstrated in some cases a cellular infiltration of the membranous labyrinth. Politzer found ecchymosis in the labyrinth in two cases, and Schwartze congestion of the cochlea in one.—(*Ref.*, Ziemssen's *Encyc.*, vol. i. p. 159; Von Troeltsch, *op. cit.*, pp. 383, 556; Burnett, *op. cit.*, p. 593.)

Cerebro-spinal Meningitis. — Speaking of this disease, Von Troeltsch says, "One of the commonest complaints of the patient at the beginning of the attack is of tinnitus; sometimes earache and auditory hallucinations set in, and very often more or less marked impairment of hearing, which often goes on to complete deafness."

Deafness is generally bilateral, more rarely unilateral. The last named author considers that in many cases this symptom is due to changes in the floor of the fourth ventricle. Ziemssen thinks that such may be the case, but his clinical experience is against this view.

I shall now mention the morbid conditions which have been observed in the ears of those who have suffered from cerebro-spinal fever.

(1.) Acute suppuration of the middle ear is not uncommon: Ziemssen has noticed its occurrence on the twenty-fifth day.

(2.) Congestion and purulent infiltration of the labyrinth.

(3.) Compression and purulent infiltration of the auditory nerve; these two last conditions are found either together or separately.

Roosa states that from the post-mortem examinations which have been made it seems that the labyrinth is the part most affected. The same author calls attention to the well-known absence of facial palsy in such cases. Burnett believes that as the arachnoid fluid is continuous with the endo- and peri-lymph it is probable that the inflammation thus extends to the labyrinth, especially as arachnitis is a marked feature of the disease. Deafness may come on at any stage, but, according to Ziemssen and Hesse, it most commonly begins on the third day. The latter hesitates to decide between two theories as to the causation of suppuration of the labyrinth. He thinks it may be due either to extension along the nerve or to the internal ear being affected simultaneously with the pia mater.

It has been noticed by many authors on ear disease that children are occasionally attacked by symptoms of cerebral irritation, are laid up for a few days, and eventually, after recovery, are affected with deafness and stagger in their walk. The etiology of these symptoms is still a matter of doubt. Voltolini of Breslau ascribes them—without adducing pathological proof, however—to primary inflammation of the labyrinth. Gottstein, a physician practising in the same town, makes out a very strong case against Voltolini's theory, and considers the majority of such cases to be in reality mild or abortive attacks of cerebro-spinal fever. Gottstein, between March and October of the year 1879, had under his care twenty-five cases of what Voltolini describes as otitis labyrinthica, out of a total of 250 patients.

"The very fact," he goes on to say, "that so large a proportion of cases of otitis labyrinthica (ten per cent.) were among the cases of ear-diseases which came under my care during the above period must of itself create surprise. If I exclude six cases which date a year and more back, there are nineteen cases between December 1878 and August 1879. Seven of these came from Breslau, five from near Breslau, and four from more distant districts. This remarkable coincidence of the same affection in time and place seemed to be no mere chance, and I could not help thinking of an epidemic. The only case under regular medical treatment from the first was diagnosticated as cerebro-spinal meningitis. In one other case, however, an epidemic of cerebro-spinal meningitis could be assumed, because the symptoms were typical of the disease, and secondly, because five children (two of whom became deaf) were attacked with the same disease in the same village."

Gottstein then gives the histories of several cases, and seems to prove them to have been in reality cerebro-spinal fever, and finally sums up as follows:—"Out of nineteen cases we have found six in which meningitis could probably be regarded as the starting-point of Menière's complex symptoms. In the thirteen remaining cases feverishness and violent headache were present; vomiting was not observed at first in two cases; the mind was more or less affected in nine; in three cases fever, headache, and vomiting were the only symptoms preceding the affection of the ear. The patients, with one exception, belonged to the lower classes, and lived amidst bad sanitary conditions; their age varied between two and sixteen years. If we take all these points into consideration, and add that an epidemic of cerebro-spinal meningitis had raged in Breslau and Silesia since last autumn, we have no hesitation in connecting these cases of auditory vertigo with feverishness and other peculiar symptoms with this epidemic.

Permanent deafness is a very common sequel of cerebro-spinal meningitis. It is almost always bilateral and absolute. Ziemssen gives some very startling reports on this subject. In the deaf-mute institution at Bamberg there were in 1874 forty-two pupils, all of whom owed their affliction to this cause. In a similar establishment at Nuremburg the number of pupils was thirty-two, and of these two-and-twenty had become deaf after cerebro-spinal fever. In some few cases gaps in hearing have been noticed, *i.e.*, ability to hear some notes, but not others.

After recovery the patient often has a staggering walk, like a sailor's roll.

Out of twenty-four cases of cerebro-spinal meningitis observed by Fasset in Philadelphia, twelve recovered, three remained totally deaf, and one partially so. In a very interesting monograph on cerebro-spinal meningitis, with special reference to subsequent deafness and loss of equilibrium, Moos seems to arrive at the following conclusions:—

(1.) That Voltolini's cases of primary inflammation of the labyrinth were in reality mild cases of epidemic meningitis.

(2.) That in those cases where staggering remains after convalescence, it generally disappears before the twenty-seventh month.

(3.) That in those cases where labyrinthine deafness comes on between the third and tenth day of illness, the labyrinth is involved by becoming in itself the seat of inflammatory changes; whereas when deafness begins on or after the fourteenth day, the internal ear has become involved by extension of inflammation along the auditory nerve.

(4.) That those who are able to hear high notes have a better chance of recovering hearing than those who cannot.

(5.) That in cases of absolute deafness without tinnitus the occurrence of this symptom is favourable, as showing a tendency of the auditory nerve to resume its function.

The above is merely a short *résumé* of the most striking points in Moos's work; but the reader who is interested in the subject should study the original monograph, which is probably the most complete existing essay on the subject.—(*Ref.*, Von Troeltsch, *Ohrenheilkunde*, pp. 536-7; Ziemssen's *Ency.*, vol. ii., pp. 724, 725, 726; Burnett, *On the Ear*, p. 564; Roosa, *Diseases of the Ear*, p. 532; *American Journal of Otology*, vol. ix. p. 255; *Meningitis Cerebro-spinalis Epidemica*, von Dr S. Moos.)

Whooping-cough.—This, according to Roosa, is a common cause of acute aural disease, and probably also of chronic catarrh. During attacks of cough the membrane may rupture, with or without hæmorrhage from the ear.—(Roosa, *On the Ear*, p. 353; Von Troeltsch, *Ohrenheilkunde*, p. 147.)

Malaria.—The relation of malaria to ear-disease has lately attracted the attention of Weber Liel and Voltolini. The former has described several affections which he considers due to malaria, and curable by quinine.

Otalgia intermittens, or intermittent aural neuralgia, seems, from descriptions given by these two authors, often to arise in an ear which is already the seat of catarrh. The symptoms are violent pain at night, with intermission during the day.

Weber Liel also describes an otitis media intermittens which is often preceded by pharyngeal catarrh. Its symptoms are rigors more or less marked, occurring at night, and followed by perspirations; the ear is at the same time affected, and pain is generally complained of on the second attack of ague. Eventually perforation of the drumhead and subsequent otorrhœa set in. During the day pain and otorrhœa both diminish, only to return again at night, until at last the disease becomes confirmed and loses its intermittent character. Dr Hotz of Chicago has to a very great extent confirmed these views, and described a number of typical cases. He lays great stress upon severe subjective symptoms with comparatively slight objective signs as a feature of malarial otitis. Another form of malarial disease of the ear Weber Liel illustrates by the following cases:—An old lady was suffering from tinnitus aurium and deafness, which symptoms were temporarily relieved by the air-douche, but always returned again with increased severity at night. Quinine effected a cure. In several of his cases Weber Liel observed splenic enlargement, with tenderness over the organ.

These facts seem to prove that a malarial taint makes itself felt in affections of the ear, just as in other diseases.—(*Ref.*, *Monatschrift für Ohrenheilkunde*, 1878, May; *American Journal of Otology*, ix. p. 241.)

(To be continued.)

ARTICLE IV.—*Report of the Royal Maternity and Simpson Memorial Hospital for the Quarter ending* 31*st July* 1881.

Dr KEILLER, F.R.C.P.E., Senior Acting Physician.

(*Read before the Edinburgh Obstetrical Society*, 14*th December* 1881.)

INDOOR CASES.

(*Reported by A. Bowie, Resident Surgeon.*)

DURING the quarter there were sixty-five deliveries inside of the Hospital. Of these forty-seven were cases of natural labour, nine were laborious, five preternatural, while four were complex.

The following scheme shows the presentations and positions:—

	L.O.A.	R.O.A.	R.O.P.	L.O.P.
Forty-seven natural labours, .	43	—	4	—
Nine laborious labours, .	7	1	1	—

and one was a case of rigid os.

Of the five preternatural labours two were breeches, L.S.A.; one left shoulder, dorso-anterior; one footling, L.S.A.; and one was a six months' child, delivered on the mother's road towards the Hospital.

Of the four complex labours one was a left shoulder with the cord prolapsed. The uterus in this case had one large and two small fibroids. One was a vertex, L.O.A., with eclampsia in the mother; one was a footling in a primipara, with the cord prolapsed; while the remaining one was a case of twins—a male child presenting R.O.P., vertex, and a female following by the feet, L.S.A. All the mothers in the complex cases were primiparæ.

Thirty of the deliveries were in multiparous mothers; the remaining thirty-five were primiparous. The average duration of labour in the multiparæ was 9 hours 47 minutes, while that of the primiparæ was 17 hours. The average age of multiparæ was 27 years; that of the primiparæ 23 years and 4 months. The oldest primiparous woman was 42 years; the youngest, 14 years and 9 months. In both these cases the children were large and healthy. The older woman required the aid of forceps after 15¼ hours' labour. The younger was delivered by the natural powers after a labour of 26½ hours. Of the nine laborious labours five were delivered by forceps. Of the remaining four the membranes had all ruptured prematurely, and one was a well-marked case of rigid os. In the whole of them great aid was derived from the use of caoutchouc dilators. In one case (the one of rigid os) labour had been going on actively for 19 hours. The os had remained the size of a half-crown for 4 hours. A caoutchouc dilator was introduced, and labour terminated in 40 minutes. Of the simply preternatural, only one required interference to remedy the position. The shoulder presentation was turned podalically. In the case of the footling the feet were kept up and the primiparous passages dilated by caoutchouc bags. Both mothers of the breech cases being primiparous, and the membranes having ruptured with the first pain, the bags were here used also.

Of the complex cases one was turned podalically, viz., the shoulder and cord presentation. The foremost of the twins was delivered by forceps, and the feet in the case of the footling kept up, the funis having been previously returned.

Six of the perineums tore. In all of them sutures were introduced. In five union by the first intention occurred; in the remaining one we had to rest content with the gradual closing of the posterior portion by cicatrization.

The mortality among the mothers was *nil.* One case of pelvo-abdominal cellulitis occurred on the tenth day after delivery. The abscess opened into the posterior wall of the vagina, and the patient was dismissed fourteen days afterwards, cured.

With the exception of two slight cases at the beginning of the quarter, which got well, there has been no septicæmia in the hospital. There were no cases of post-partum hæmorrhage; and with the exception of two cases where ergot was given, no preparation of ergot was used.

Of the children born alive thirty-seven were males and twenty-three females, making a total of sixty. Of those born dead two were males and four females—total, six. One was dead from pressure upon the funis by the shoulder before turning could be executed, the patient having come too late to the Hospital; one was turned while still alive, but died asphyxiated; one was premature at the sixth month; one was the product of a woman suffering from delirium tremens, and was still-born; one was a breech in a primiparous mother, and had died from intrauterine pressure; while the remaining one was a footling in a primiparous mother, and was born asphyxiated owing to pressure upon the prolapsed cord. The longest cord measured 41 inches; the shortest was 13 inches.

OUTDOOR CASES.

(*Reported by G. W. W. Ashdown, Resident Surgeon.*)

During the quarter there have been 108 cases delivered under the auspices of the Hospital by the pupils attending the institution, who individually had charge of the cases, and consulted in cases of difficulty on several occasions.

Of the total number of births, sixty were male and forty-eight were female. Ninety-one were natural labours, and in only one case the child was still-born. In all the others the results to mothers and children were most favourable. Seven were laborious cases, eight preternatural, and two were complex cases. Out of this number five were breech cases, in three of which the children were dead; two cases of twin birth, which both did remarkably well; three were forceps delivery, with satisfactory results to parents and children. One case of placenta prævia (in which assistance was not sent for till the woman was moribund) was unfortunately lost, though everything was done to save the mother and child.

In one case, under the charge of a gentleman not a pupil of the Hospital, the placenta had been allowed to remain, and on arrival from the Maternity the uterus was found nearly up to the ensiform cartilage, filled with clots and blood. It was speedily emptied, and the afterbirth taken away. The woman was in a moribund condition, almost pulseless, with other signs of excessive hæmorrhage. Sulphuric ether was injected hypodermically, and Liebig's extract and brandy administered by the mouth and rectum almost continuously. After prolonged restorative treatment the woman had so far recovered as to be left, and she ultimately did well.

There was one case of abortion at the fifth week, which recovered well; a case of miscarriage; and one of premature labour, in which the fœtus did not survive, but the mother did well.

Of the above cases, sixteen were primiparous and the remaining ninety-two were multiparous cases.

ARTICLE V.—*Funic Hæmorrhage during Labour.* By J. HALLIDAY CROOM, M.B., F.R.C.P.E., Physician, Royal Maternity Hospital; Lecturer on Midwifery and Diseases of Women, School of Medicine; Vice-President, Obstetrical Society, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 14th *December* 1881.)

INTERFERENCE with fœtal life through hæmorrhage from the placenta, whether it is prævia or in its normal position, is, of course, well recognised, and, unfortunately, of comparatively frequent occurrence. Direct bleeding from the umbilical cord is, however, very rare, and has received correspondingly little attention.

Such hæmorrhage may take place in cases where women are suddenly overtaken by labour and are delivered in a standing position. In such cases the fœtus falls to the ground, and by its weight, or the suddenness of its fall, the umbilical cord is torn. Such a rent may take place at any part of the cord, and sometimes even a portion of placenta is torn out with it. The hæmorrhage is never great. The vessels retract, the edges of the wound are ragged. From torn vessels the bleeding is always slight, and in a cord so torn there is often none at all. Umbilical hæmorrhage of the newly born child has long occupied a prominent place in the medico-legal history of infanticide as among those causes which destroy the child by omission, in contradistinction to its direct destruction by commission. Hæmorrhage of this kind is a subject of interest for medical jurists rather than for obstetricians. As it can hardly be included under the term funic hæmorrhage during labour, I propose in the sequel to discuss that form of funic hæmorrhage which is apt to occur in cases of faulty insertion of the cord into the placenta.

There are four insertions:—1. Central; 2. Eccentric; 3. Marginal; 4. Velamentous. Of these insertions the eccentric and central may be regarded as the ordinary types; while the marginal and velamentous are abnormal, and are both concerned in producing the accidents of which this paper treats.

In a paper on the irregularities observed in the cord, Valenta gives the following with regard to the relative frequency of these insertions of the root of the cord:—Out of 2471 labours in which the condition of the placenta was noted, the root of the cord was eccentric 1950 times, central 342 times, marginal 158 times, velamentous 21 times. The separation of the funic vessels previous to their entry into the placental substance—insertio velamentosa—is a well-recognised condition, but its influence as a factor in the production of hæmorrhage during labour has received comparatively little attention. This is scarcely matter for surprise when the rarity of velamentous insertion of the cord is considered. That it is but rarely met with may be gathered from the following facts:—

Siekel, out of 502 deliveries observed 3 cases—that is, 1 in 160.

Cornelius, quoted by Huter, gives 1 in 1000.

Chiàri, Braun, Spaeth found 4 in 1835 deliveries—that is, little more than 2 in 1000.

Chantreuil[1] remarks on these figures, that among them, where experience is more extended, the proportion is even less.

Valenta, as I have mentioned, gives 21 in 2471 cases.

The above figures show an average occurrence of this condition of nearly 5 per 1000.

Now, if velamentous insertion in general is a condition so rarely met with in obstetrics, it follows that a disposition of the funic vessels on the membranes in such a way as to be a cause of hæmorrhage must be a combination of the rarest occurrence. This is universally admitted to be the case, for while our English writers scarcely make any reference to the subject at all, the latest writers of foreign text-books, viz., Spiegelberg, Kleinwachter, and Zweifel, touch on the question very briefly in a sentence or two, and all agree in remarking on its rarity. As bearing on the subject of funic hæmorrhage, it becomes necessary to consider the arrangement of the vessels in velamentous insertion. The distance at which the vessels enter the membranes from the placenta is very variable.

The following short table is given by Huter[2]:—

18 times	3 centimetres.
2 „	3 „
1 „	4 „

Wrisberg mentions a remarkable case where the cord was fixed into the membranes exactly opposite the placenta. Again, it has been observed that the vessels bifurcate a very considerable distance before they reach the membranes. The arrangement of the vessels is of interest. The umbilical vein, after its separation from the cord, and before it reaches the membranes, divides into two branches. From these there are given off one or two large veins. When the principal branch reaches the membranes it again divides into many small branches. The largest of these is about the size of a crow-quill.

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[1] Chantreuil, *Des disposition du cordon,* Paris, 1875.

[2] Chantreuil, *op. cit.*

It is worthy of remark, as bearing on the subject of the present paper, that at the points where the branches diverge from the principal trunk it is dilated into a sort of sinus, and further, that both venous and arterial trunks are not throughout of the same calibre, but at one point contract into small tubes, and at another expand into larger ones. Such a condition favours rupture. When the umbilical arteries reach the membranes they break up into numerous branches of varying calibre. This network of vessels lies usually between two of the largest branches of the vein.

It must further be observed that these vessels do not run straight on to the nearest point of the placenta, but pursue a circuitous course, traversing a large area of the chorion. This circumstance bears on the present subject, increasing, as it does, very considerably the risks of laceration, and further increasing the chances of the development of the fœtus being interfered with by pressure on the vessels from the growing ovum. It is also a fact that the veins are more apt than the arteries to pursue a devious course, a circumstance favourable to the production of hæmorrhage, owing to the comparative thinness of the venous walls, their dilated and varicose condition, and their consequent greater liability to rupture.

The actual insertion of a velamentous cord into the placenta varies.

1*st*, It may be marginal; that is, the vessels may run off the membranes into the substance of the placenta at the rim.

2*nd*, It may be eccentric; that is, the vessels may run over the placenta a considerable distance before they dip into its substance.

3*rd*, It may occasionally be both marginal and eccentric; that is, one part of the funic root may run in at the rim, while another may run some distance over the placenta before it finally dips into its substance.

Huter[1] in his essay makes a suggestion as to the course of development of this velamentous insertion. He points out that those who would account for the insertion of the cord into the placenta by the theory that the allantois is carried into the chorion only to the decidua serotina are in error. It is a fact that in early ova the whole chorion is surrounded by the vessels of the allantois. Huter says that before the atrophy of the villi sets in so as to differentiate the chorion frondosum from the chorion læve, there is one spot of the chorion richer in vessels than the rest. Here the vessels unite to form the umbilical cord. Obviously, when this vascular spot is found at the point where the chorion is united to decidua serotina, the cord will have its insertion into the placenta; but, on the other hand, when this vascular spot is found opposite decidua reflexa, then the cord will be attached to a part of the chorion which at a later period will be bare. Hence the insertion will be velamentous. Another explanation has been offered by Schultze,[1] in which he suggests that a defective rotation on the part of the fœtus during the formation of the umbilical amniotic sheath may account for this. In this way, owing to adhesions between the rudimentary cord and either of the fœtal membranes, a defective sheath is the result, and the vessels, permitted to diverge, are distributed to points more or less remote from the placenta.

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[1] V. Huter, "Die velamentöse Insertion der Nabelstranges," *Mon. f. Geb.*, xxviii., 1866, S. 330.

Such being the disposition of the umbilical vessels in velamentous insertion of the cord, the inquiry next arises, Is the condition accompanied by any special danger to the fœtus? Two sets of dangers have been described:—

First, during pregnancy.

Second, during labour.

It is with the latter that this communication is specially concerned. A short reference, however, to the first set will not be altogether foreign to the subject. It has been alleged by some authors that this condition interferes with the development of the child and gives rise to abortion. Chantreuil alludes to this, and Huter says that while in some cases he has observed the fœtus to be ill developed, in other cases it does not seem to suffer, and is born alive. He draws a distinction, as far as regards this question, between those cases where the separation is near the placenta and those where the distance between the separation and insertion is great. In the latter case the condition of the fœtus is interfered with owing to the long and devious course which the vessels have to pursue; but specially because, in cases of distant insertion, the vessels have to run over a great portion of the circumference of the membranes, they are pressed on proportionately by the growing size of the ovum. Whether this is the case or not I am not in a position to say. Such a question can only be solved by observation and the record of cases. As adding some slight support to the theory advanced, I have seen two cases of premature labour about the sixth month during my connexion with the Maternity Hospital, in both of which the insertion of the cord was velamentous, and that for a considerable distance before entering the placenta. In both the fœtus was dead, and in one very much shrunken and shrivelled. I have observed this also in a case of twins which occurred in the out-practice of the Maternity during my term in 1880. With a double placenta the second fœtus was small and ill-developed, and only survived a few hours, while the first was healthy and vigorous. In the former the cord was velamentous, and inserted marginally into the placenta. It is right to say that Credé repudiates the idea altogether, and distinctly says that he has never observed that this arrangement of the cord has any effect on the fœtus whatever.

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[1] Schultze, quoted by Lusk, *Science and Art of Midwifery*, p. 282.

I now turn to the dangers accompanying the condition of the cord during labour. The main danger is hæmorrhage. The relation between velamentous insertion of the cord and hæmorrhage was recognised by *Wrisberg*,[1] to whom belongs the credit for having first described insertio velamentosa.

Lobstein[2] pointed out the relation between velamentous insertion of the cord and hæmorrhage involving the death of the fœtus.

Benchiser[3] in a thesis discusses velamentous insertion of the cord, and specially refers to the relation between this condition and certain hæmorrhages.

Uvedale West describes several cases of battledore placenta in which the funis was inserted into the membranes, and where it divided into its vessels some distance from the edge, and refers to tearing of these vessels with a torn placenta.

Huter[4] describes, in his important memoir on velamentous insertion of the cord, the conditions under which such insertion may be a source of danger to the child. He points out that the insertion of the cord is seldom more than four or five inches remote from the border of the placenta. He draws attention to these points :—

1. That when the cord is inserted into the edge of the placenta, prolapse is apt to take place.
2. That if the vessels which are inserted into the membranes have their course at a distance from the os uteri, the rent of the membrane will be out of reach of these vessels, and the labour will in no way be endangered.
3. If the vessels run in the lower segment, they are apt to be torn.

Chantreuil,[5] in an elaborate essay on the umbilical cord, discusses velamentous among other dispositions of the funis which interfere with pregnancy and labour, and is the only author with whom I am acquainted who fully describes hæmorrhage produced in this way.

Joulin[6] refers to the subject shortly.

Schrœder[7] devotes a paragraph to the subject, in which he shortly but succinctly describes this form of hæmorrhage.

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[1] Wrisberg, Henri Auguste, "Commentat. de Secundinar. Human. Varietate," sect. 1, obs. ii., in *Nov. Comment. Societ. Reg. Scient.*, Gottingen, t. iv., 1773, p. 63.

[2] Lobstein, "Notice sur une disposition des vaisseaux du cordon," *Arch. de l'art des accouchments*, Strasbourg, 1801, p. 320.

[3] Benchiser, Robert, de Pforszheim, *Thèse*, Heidelberg, 1831.

[4] Huter, "Ueber die Vorliegen der Nabelschnurgefässe," *N. Zeitsch. f. Geb.*, xii., 1842, S. 48.

[5] Chantreuil, *op. cit.*

[6] Joulin, *Traité d'accouchments*, p. 986.

[7] Schrœder, English Translation, p. 312.

Ruge[1] mentions several cases of abnormal disposition of the umbilical vessels, and describes velamentous insertion as being a source of danger to the fœtus.

Spiegelberg,[2] *Kleinwachter*,[3] and *Zweifel*[4] each make short reference to the subject.

The record of individual cases of velamentous insertion is frequent, but of those associated with hæmorrhage I have only been able to collect the following:—

Poullet of Lyons[5] records two cases, one in the fifth and the other in sixth months of pregnancy, in both of which, without any previous pains or the slightest indications of labour, the membrane suddenly ruptured. In both cases marked velamentous insertion of cord was found. He argues that this condition is a cause of early rupture, and may for this reason give rise to premature labour.

Pluskal[6] describes a case of interest. The umbilical cord of a fœtus, dead previous to delivery, was divided 15 centimetres from its insertion into the placenta. At the apex of this angle there was a varicose pouch as big as a hen's egg. The walls were thin and torn. The hæmorrhage had lasted three hours. The fœtus was exsanguine.

Lamœstre[7] records a case of normal labour, except that there was a small quantity of blood lost during the labour. The child was born dead. Surprised at this, Lamæstre examined the placenta, and found that the vessels of the cord were inserted into the membrane, over whose surface they crossed for a considerable distance. On making close inquiry of the patient he found that just before the onset of labour she had an abundant hæmorrhage, followed at once by active labour.

Deneux[8] refers to a case of rupture of the umbilical vein.

Bailly[9] showed a placenta to the Anatomical Society of Paris, and said, "The cord separated in the chorion 10 or 12 centimetres from the placental border; from this point the vessels spread out and radiated over the membranes." He distinctly adds, apparently as contrary to his expectation, "This disposition was *not* fatal to the child, which was born alive."

Valenta[10] relates a case of a woman who was delivered of a child at full term. The woman stated that the waters escaped before labour pains set in, and from that time till the completion of labour there was continuous hæmorrhage. On examining the placenta it was found to be 6 inches in diameter, and situate high up in utero. The vessels were given off from its lower margin. Before uniting to form the cord they ramified on the surface of the chorion for about 4½ inches. The cord measured 16½ inches long. There were four series running from the placenta, which formed two venous trunks. At their junction to form the main trunk there were two rents. There was also a slight rent in a small arterial ring there. The vessels were situate over the os uteri, and the fœtus was born dead.

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[1] Ruge, "Einige Fälle von abnormen verlaufe d. Placentargefäne," *Mon. f. Geburts.*, xxviii., 1866, S. 330.

[2] Spiegelberg, *Lehrbuch der Geburtshülfe*, p. 571.

[3] Kleinwachter, *Grundriss der Geburtshülfe*, p. 434.

[4] Zweifel, *Lehrbuch der operativen Geburtshülfe*, p. 324.

[5] Poullet of Lyons, *Annales de gynecologie*, October 1879.

[6] Pluskal, "Hæmorrhage produite par la rupture d'une varice du cordon," *Gaz. Med.*, 1844.

[7] Lamæstre, Chantreuil, *op. cit.*

[8] Deneux, *Mem. sur la sortie du cordon pendant le travail*, Paris, 1820.

[9] Bailly, Chantreuil, *op. cit.*

[10] Valenta, Betz, *Memorabilien*, vol. xix. part 5.

Two cases have come under my own observation—the one in connexion with the Maternity Hospital, and the other some years ago in private practice. The placenta from the first case was retained, and a drawing made of it at the time. This drawing I have reproduced as a chromo-lithograph.

Case I.—Mrs H., a multipara, fell into labour on Sunday, the 24th October. Dr Machattie, my then resident at the Maternity Hospital, sent for me as the presentation seemed to be somewhat abnormal. On examination I found the os well dilated, the membranes unruptured, and three distinct pulsating cords passing through them. Beyond and within the membranes several coils of the umbilical cord could be felt floating free in the liquor amnii. The head was high up beyond reach. The woman had a pendulous abdomen. On careful examination we observed that the vessels were well apart, and that the edge of the placenta could be felt low down on the left side at the os uteri. The diagnosis was a velamentous insertion of the cord, with one or two prolapsed coils, and a slight placenta prævia. As the os dilated there was some slight hæmorrhage from the edge of the placenta. We waited until the os was fully dilated, and then, as the woman was a multipara and no obstruction in the pelvis, and as the head was high up beyond easy reach of the forceps, we resolved to turn. I ruptured the membranes, during the interval of a pain, at a point between the vessels, and turned and delivered easily. The child was alive. The point of interest lay in the fact that the insertion of the cord was velamentous. The vessels coursed for some distance over the membranes before their final insertion into the placenta at its margin. As will be seen from the chromo-lithograph, the veins are the more tortuous. At the point where the first two trunks of the umbilical vein joined there was a rent, caused either through my hand while turning or through the delivery of the fœtus. It may have occurred at the time of rupture of the membranes. There was no escape of blood, however, when I introduced my hand into the uterus. The cord was 24 inches long, and was marginal.

Case II., of which I have but a brief note, occurred in private practice. A patient, aged 40, sent for me as labour had been going on for some time, and she was having very considerable hæmorrhage. When I saw her the membranes were ruptured, the head low down, and hæmorrhage ceased. Shortly after my arrival the child was born dead, pale, and anæmic. The placenta was delivered easily with some clots in ten minutes. I put the case down as one of accidental hæmorrhage. On inquiry I found that the membranes ruptured an hour before my arrival, and from their rupture until the time of birth the discharge of blood with or without liquor amnii was continuous. On examining the placenta I found a velamentous insertion of the cord. The vessels, before reaching the placenta, into the lower margin of which they were attached, separated and ran for three inches over the membranes. The venous trunks were most numerous, as well as long and tortuous. Two of them at their union were torn—apparently a site of the rupture of the membranes.

Method of its Production.—It is only under exceptional circumstances that velamentous insertion of the cord is associated with hæmorrhage. It may arise, first, when the vessels forming the cord, as they expand fan-like and course over the membranes, come to lie over that segment which corresponds to the os uteri. Such are vasa prævia. Under such circumstances hæmorrhage is not unavoidable, for if the vasa prævia are long enough to have the membranes rent between them the child may pass through the rent so formed and the cervix without injuring the funic vessels at all. The main element of safety will consist in the vessels running a long course, for if the bifurcation of the vessels take place within the lumen of the cervix the rent will involve the bifurcation, where, as I have pointed out, the vessel is expanded and weak. Again, if the vessels are small and are well compressed by the fœtal head as it passes, no bleeding takes place and no harm results. On the other hand, if the vessels are closely situate or short, and if the membranes rupture near the site of the vessels, one of them may be involved in the rent and the child die from hæmorrhage. Under such circumstances the child is born blanched and anæmic, probably dead, with all the signs of loss of blood. In the alternative already mentioned, where the vessels are compressed and hæmorrhage in this way controlled, the safety of the child is not secured. The fœtus is rather exposed to a fresh risk, for this very pressure may render the fœtus asphyctic and so destroy it. Such a result may take place without rupture of a vessel at all, and must be regarded as one of the risks attendant on this disposition of the funic vessels. It is, indeed, perfectly conceivable that such a result might take place previous to rupture of the membranes.

There is, however, a second condition, as illustrated by Case 2, where dangerous hæmorrhage may take place from the cord, more especially from the root. In such a case the placenta is situated low down, at or near the margin of the os, and the cord is inserted into the edge of the placenta. Under such circumstances, whether the insertion is velamentous or not, the dilated end of a vessel may give way, either from the effects of labour or from artificial interference with the labour.

PLATE I.

Two Views of Placenta referred to in Case I.

A. Fœtal surface of low-situate Placenta, showing—1. Velamentous insertion of Cord. 2. Tortuous condition of the Venous Trunks. 3. Laceration of first branch of Umbilical Vein.

B. Uterine surface of same Placenta, showing—1. Marginal insertion of Cord. 2. Separated edge of Placenta at Os Uteri Internum.

PLATE II.

A. Velamentous disposition of the Funic Vessels (after Hyrtyl).

B. Subsidiary Placenta with bow-shaped Subsidiary Vessels (after Hyrtyl).

C. Velamentous insertion of Cord, showing a ruptured Vas Aberrans (after Benchiser).

Plate I.

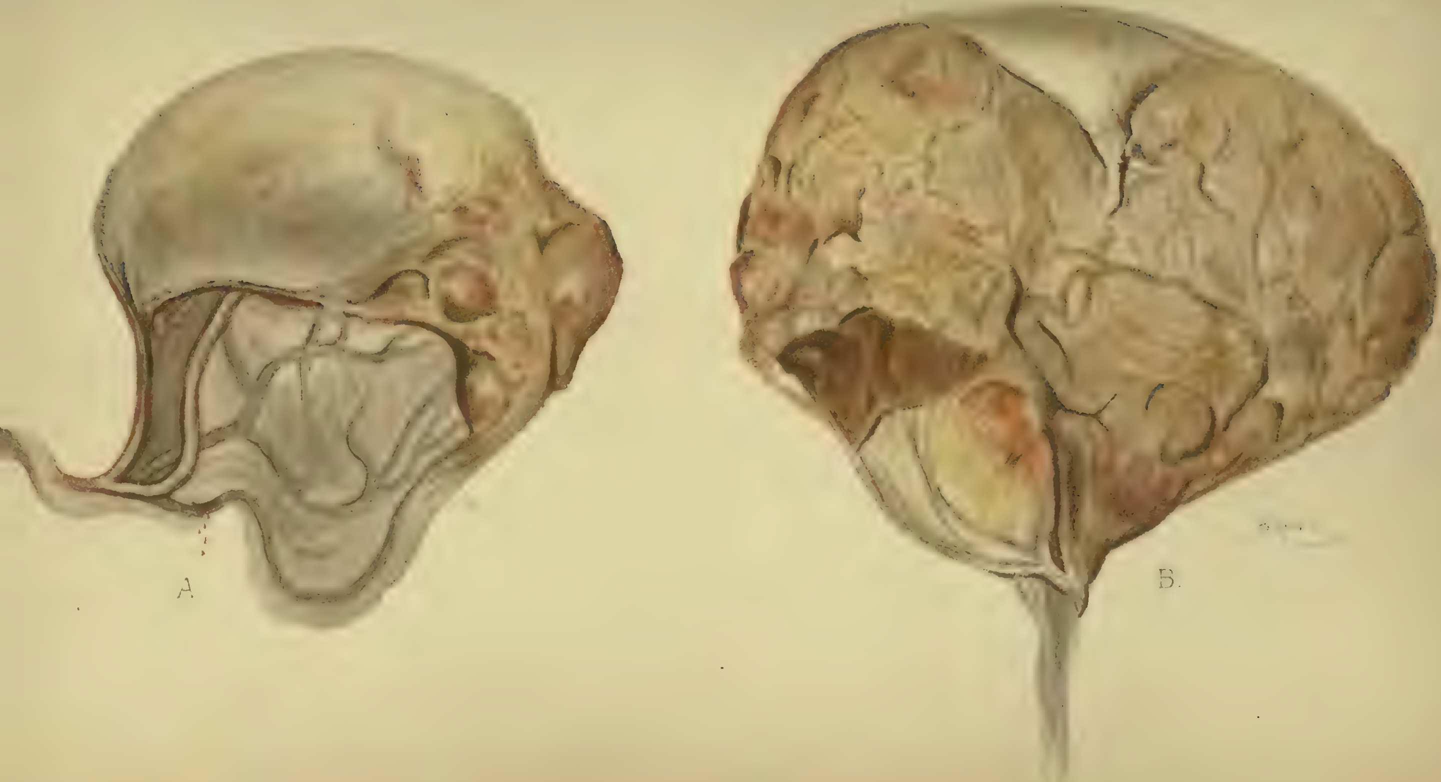
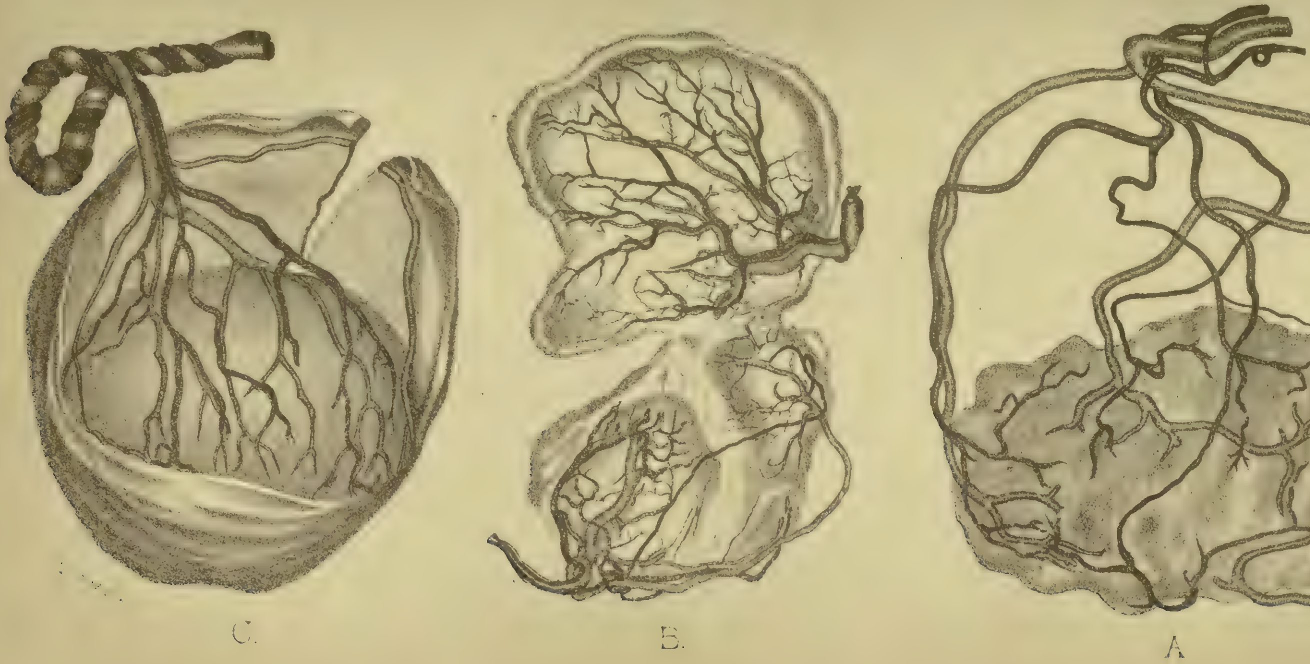


Plate 2



Here the presenting part is the funis, not, as in ordinary presentations of the cord, a prolapsed loop, but the root of the cord attached to a battledore and prævia placenta. Associated with this condition, the cord proper can be felt within the membranes, and, if not managed carefully, may complicate the case by becoming prolapsed in front of the head, and add to the risks of the child by being compressed. This prolapse of the cord as an occasional complication of velamentous insertion of the cord has been pointed out by Scanzoni,[1] Huter,[2] and Credé,[3] and must be discounted in treating the case.

There is a third source of funic hæmorrhage, to which little if any attention has been directed. Such hæmorrhage may arise from a set of vessels, which Hyrtyl[4] has depicted and described, viz., from vasa aberrantia.

The subject is deserving of some attention. Three varieties of these vasa aberrantia are described by Hyrtyl :—

1. Real placental vessels.
2. Subsidiary vessels.
3. Vasa nutrientia chorii.

1. *The real Placental Vessels.*—These differ from the ordinary placental vessels to this extent, that they do not run through the whole of their course along the concave surface of the placenta. They leave this surface and make excursions, so to speak, for a varying distance along the chorion, beyond the margin of the placenta, and return again to the placenta and pursue the course of ordinary placental vessels. The veins seem only to act in this way with very marked eccentric insertion of the cord. Hyrtyl shows that in dimidiate and tripartite placentæ these vasa aberrantia are seldom if ever wanting. It is noteworthy that the vas aberrans is always the first branch given off from the main trunk, and that the more central the insertion the larger the vessel. Although hæmorrhage from rupture of such a vessel cannot be called direct umbilical hæmorrhage, yet the effect on the fœtus is the same, and the source of the bleeding is fœtal.

II. *Subsidiary Vessels.*—These vessels represent the radiating vessels of the root of the cord which run to a subsidiary placenta. It is striking that these vessels do not run to the nearest points in the rim of a subsidiary placenta. They rather run in the shape of a bow, arching over to that side of the subsidiary placenta which is furthest removed from the main placenta. Such small subsidiary placentæ are never separate from the main mass by any isthmus of chorion, but touch its rim, or may indeed mingle with it. Hyrtyl suggests a very ingenious explanation of the method by which this apparently remarkable arrangement is produced. The subsidiary placenta was originally far removed from the chief placenta; a branch of the umbilical vein and artery, connected by an isthmus, were conducted to it. At this time the vessels ran direct from the main placenta to the nearest point of the subsidiary. Gradually, however, by the growth of the placenta, the chorionic isthmus becomes diminished, while at the same time the vessels are not shortened, but bent in the form of a bow sideways. Now if, by the growth of the chief placenta, the subsidiary comes in contact, or is fused with it, and if the connecting vessels preserve their original length, then these vasa aberrantia will run in this bow form through the chorion, and appear as if connected with the further side of the subsidiary piece. From such vessels, if placed in convenient circumstances, hæmorrhage may take place. Here, again, the hæmorrhage is not quite directly from the umbilical cord, but in so far as such vessels form a subsidiary cord to a subsidiary placenta the hæmorrhage is umbilical.

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[1] Scanzoni, *Lehrbuch der Geburtshülfe*, vol. ii. p. 167.

[2] Huter, *op. cit.*

[3] Chantreuil, *op. cit.*

[4] Hyrtyl, *Die Blutigefäne der menscheichen Nachgeburt in normalen und abnormen Verhaltnissen.*

III. *Vasa Nutrientia Chorii.*—These vessels are very inconsiderable in size. They may be seen in *early*, but are more numerous in *mature* placentæ. They are obviously vasa aberrantia. They are fine, though not capillary tubes. In contradistinction to the vasa aberrantia already described, they pursue a *direct* course. They are generally thirteen in number. Hyrtyl says that when these vasa nutrientia are present in numbers they are associated with a thin-rimmed placenta, and in their absence the placental edge is thick. I have only referred to these in order to complete the description of aberrant placental vessels, but their small size and short course exclude them as causes of any considerable hæmorrhage.

The diagnosis will be easy, difficult, or impossible, according to the direction which the disassociate vessels pursue. If the placenta is in its normal position, and if the vessels diverge and spread out high up in the uterus, then any diagnosis of the condition must be an impossibility. In such a case there are no symptoms and no hæmorrhage, and the velamentous cord will only be recognised post-partum. If, however, the vasa prævia or vas aberrans, in their course over the membranes, pass over the segment situate at the os uteri, they will then be easily accessible to the finger, and the vessels can be felt moderately thick and firm. Their number will vary. They may be spread out fan-shaped over the os; there may be one or two, or, perhaps, but a single vessel. They are apt to be, and have been, mistaken for the prolapsed and knotted cord, but a little care will prevent the mistake. Specially it will be noted that the vessels cannot, like the cord, be pushed back into the liquor amnii. Hæmorrhage, however, is the most important and serious symptom, and may take place under any of the circumstances which I have already described. Still, in the absence of the actual feeling of the vessels, accurate diagnosis of the cause of the hæmorrhage will be difficult, if not impossible.

The time when the hæmorrhage takes place varies very considerably, for in some of the cases recorded it took place many hours before delivery, and, of course, the longer before delivery the greater the danger to the fœtus. Usually, however, the vessel tears just when the membranes rupture, and the liquor amnii escapes, mixed to a greater or less extent with blood. If the labour does not end shortly, the result is the birth of a dead, exsanguine fœtus.

The risks attendant on this disassociated condition of the funic root would be incomplete were no reference made to the occurrence of an accident during delivery which is fortunately rare. It is scarcely likely to occur in the hands of a properly taught practitioner. I mean rupture of the vessels during delivery of the placenta. If traction is made on the cord when the vessels are so dispersed, from their size, isolation, and tenderness, they are apt to give way. Such an accident is likely to occur only in the hands of improperly taught midwives, for delivery of the placenta by means of traction on the cord is abandoned as contrary to the mechanism of labour. It is an accident of comparatively little importance. Its occasional occurrence with a velamentous cord is an additional argument for impressing upon midwives the importance of leaving the cord alone.

Much doubt and awkward embarrassment might arise to the accoucheur when, as happened in a case recorded by Dr R. Uvedale West, a velamentous cord and a battledore placenta occurred with one of the funes of a twin placenta through its accidental tearing away from its attachment. Velamentous insertion of the cord with twins has been noted repeatedly. Chantreuil mentions two cases, one recorded by Somner, and the other by Perraud; and M. Depaul presented to the Académie de Médicin the placenta of triplets—first cord inserted into the centre; second at the margin; third velamentous.

Treatment.—In managing a case in which such a condition is present, the main point is to preserve the membranes intact as long as possible, until the os is freely dilated, so that delivery may be effected without delay immediately after their rupture. Poullet's case, to which I referred, would seem to show that early rupture is a likely accident to occur. To obviate this, Scanzoni suggests the introduction of an indiarubber ball. This is scarcely to be expected to do much service as a preventive. Obviously, if the membranes rupture while delivery is impracticable, the child will bleed to death. If a vessel is torn after rupture of the membranes, immediate extraction by whichever method can be accomplished with most ease and rapidity is imperative in the interests of the child.

After the case is once recognised, frequent examination should be avoided, the patient kept quiet, and dilatation of the os promoted by means of opium and chloroform. Immediately on rupture of the membranes, unless, indeed, the labour is very rapid, delivery should be accomplished by forceps or turning, according to the circumstances of the case. Perhaps it may be well to add that in any case where death of the fœtus has occurred the placenta and membranes should be carefully examined; and it may be that funic hæmorrhage will be found to account for some fœtal deaths which from want of examination, have been referred to other causes.

ARTICLE VI.—*Induction of Premature Labour in a Woman who had been Delivered formerly by Craniotomy; Child Alive.* By T. G. NASMYTH, M.B.

(*Read before the Edinburgh Obstetrical Society*, 23*rd November* 1881.)

THE following case presents features of unusual interest, from both a medical and medico-legal aspect.

A. W., unmarried, aged 39, has now had four children. Her first three were all destroyed, craniotomy having been performed at each delivery, and every time the woman was seriously ill, the result of the dangerous operations she had to undergo. The last time craniotomy was performed I was present, and saw the operation performed by my predecessor, the late Dr Mungall. I remember he did not fail to tell her the danger she ran, and the probability that she might die from the operation. She lately, however, again became enceinte, and was in full anticipation of the certain death of her offspring and the probable death of herself. I think the law should interfere with such a confirmed offender, three lives having been destroyed from her own *avoidable* mistakes.

The woman is a poor deformed creature, very small in stature, and badly made. Weighs about 7 stones; height, 5 feet.

On hearing that she was enceinte, I went to her sister, a married woman with a family of her own, and urged her to endeavour to get her sister to come and see me, so that for my own satisfaction, and to be forearmed for what was to come, I might examine and ascertain what was the condition of her pelvis, and, if I found that amount of deformity which would justify the early induction of labour, to do so. She, however, would not come till late in what she believed was the eighth month of pregnancy. On examination I found that the pelvis was a decidedly rachitic one, the pubic angle wide, and the body of the sacrum projecting well forward into the cavity of the pelvis. Using the breadth of my fingers as a pelvimeter, I found that four fingers could not pass between the sacrum and pubic symphysis. My fingers are about $2\frac{3}{4}$ inches in breadth. I therefore came to the conclusion that I should at once induce premature labour. I therefore passed a gum elastic catheter into the uterus, posteriorly to the membrane and enclosed child. The catheter remained in twenty-four hours, and during that time gradual dilatation of the os occurred, but no uterine contractions were felt. At the end of that time I passed a sound into the uterus and separated the membrane round the margin of the os, and left the woman with injunctions to send for me after uterine action had been well established. At the end of thirty-six hours from the first introduction of the catheter I was called, and found that the head was engaged at the brim, and that there were strong uterine contractions. I, without using chloroform, introduced Simpson's forceps, and with less difficulty delivered a living child than in some forceps cases I have had. The child was small,—I did not weigh it, however,—and looked as if not more than at the eighth month. Since then it is getting on quite well, and, if the mother is at all desirous of its survival, should continue so.

In consulting authorities previous and subsequent to my case, I find there is not at all a unanimous opinion regarding the lowest possible conjugate diameter through which a fœtal head may pass without reduction. This can be explained in various ways.

Different writers having different means of pelvic measurers, and each not giving quite the same result. Then there must be taken into account the different degrees of development of both mother and child. Some women are better adapted for bearing children than others,—it may be from having a better-formed pelvis, or may be less interfered with from less space being taken up by the pelvic muscles; or another, what is more important, their infants' heads being unusually small. In this case a woman whose pelvis was not so well developed as to come up to the standard given in books might have no difficulty in parturition; so that I think there should something else be taken into account to determine whether craniotomy or turning is to be performed than the mere difference of a small fraction of an inch.

In my case I was certain that the head was smaller than in any of the former times from prematurity; but even if it had been at full time I should have tried turning first, and I do not think that, although the head had become fixed at the brim, the performance of craniotomy would be much more difficult than by the ordinary way.

ARTICLE VII.—*A Case of Scarlet Fever Complicated by Acute Mania.* By R. B. MITCHELL, M.B., Fife and Kinross District Asylum.

IN the belief that it presents a combination of features not very commonly met with, I venture to report the following case:—

Mrs H., æt. 50, was admitted on a "certificate of emergency" to the Fife and Kinross Asylum on 6th October 1881. The medical certificates stated that she refused food, was sleepless, very noisy, restless, and violent, and that she laboured under various delusions—such as that the devil was under her bed and waiting for her, etc.

History was imperfect. No hereditary predisposition to mental disease was known to exist in the case. This was stated to be the patient's first attack of insanity. Eight days before admission to the asylum she began to complain of sore throat; she could not eat or sleep, became very restless and noisy, and talked "nothing but nonsense." On the second day of her illness a scarlet rash appeared on her chest, and soon spread all over the body. At the same time her mental symptoms became more pronounced, and she expressed numerous delusions, *e.g.*, that she was not good enough to live, that Satan was waiting under her bed to get a grip of her, etc. Every now and then she screamed and shouted, and frequently leaped out of bed, as if in dread of some one beneath it. After she had remained in this state for a week, during which she took little food and was very sleepless, it was found necessary to place her in an asylum. She had attempted to commit suicide (in what way was not ascertained), and her friends were all worn out in their endeavours to prevent her injuring herself and others.

State on Admission.—Patient was a stoutly-built woman. Height, 5 ft. 1 in.; weight, 9 st. 7 lbs. The skin of the trunk and lower extremities was of a scarlet colour, this appearance being most marked on the outer aspect of the thighs. The vivid redness paled for an instant in the line where the finger-nail was drawn firmly across it. Extensive desquamation of the cuticle had begun upon the upper part of trunk, the hands, and the feet.

Axillary temperature 98°·8.

Teeth covered with sordes. Tongue furred and dotted with prominent red papillæ. The tonsils, fauces, soft palate, and uvula were much swelled, deeply congested, and presented numerous patches of inspissated secretion. Patient refused food. Bowels were confined.

Pulse 98, weak, regular. Heart appeared healthy, but the patient's noisy and restless condition prevented the examination from being satisfactory.

Urine, sp. gr. 1030; reaction acid. A considerable quantity of albumen was present, and there was some degree of hæmaturia. Copious deposit of urates. Under the microscope a few red blood-corpuscles were seen, but no tube-casts. There was no dropsy.

Motor and reflex-motor powers appeared normal.

Mental Phenomena.—Patient kept her whole body in almost constant motion. She could scarcely stay in one posture for a minute, and struggled violently with the attendants. Every now and then she had a fit of swearing, screaming, and shouting. She had numerous fleeting delusions of the same nature as those indicated in the history, and had hallucinations of sight and of hearing, as shown by her almost constantly talking in an incoherent manner to imaginary persons. She was very restless and noisy for most of the first night after admission, but she slept for one hour.

There was no difficulty in diagnosing the case to be one of scarlet fever complicated by acute mania, and, of course, the most important point in the treatment of it was to protect the other inmates of the asylum from the infection.

A small disused cottage in the grounds was fitted up as a temporary hospital, and the patient was as soon as possible conveyed there, under the care of two attendants who were to stay with her. The isolation was made as complete as possible, no communication being allowed between the cottage and the asylum, except what was absolutely necessary in the conveyance of food and medicine.

Being the only medical officer in the asylum at the time, and considering the circumstances, I arranged with Dr Whitelaw of Cupar that he should visit the patient daily and report progress.

To him I am indebted for the following notes:—

8th October.—Patient took plenty of food yesterday. Got 30 grs. chloral hydrate, and ʒj. of bromide of potassium in evening yesterday, which was followed by one hour of sleep. She was extremely noisy and troublesome for the rest of the night. Urine same as on admission. Bowels freely moved by purge and an enema of hot water and soap.

9th October.—A dose of chloral hydrate (40 grs.) was followed by three and a half hours of sleep last night.

10th October.—Slept three hours last night after 30 grs. of chloral, and is much quieter. Profuse diaphoresis early in the morning.

11th.—Got no draught yesterday evening, and did not sleep last night at all. Is extremely violent and excited to-day, taxing the two attendants to the utmost. The application of a mustard blister to the back of neck was followed by a diminution in the excitement. Urine, sp. gr. 1035. No albumen.

12th October.—Slept two hours last night after ♏xl. of sol. mur. morph., and is much quieter than she was yesterday.

13th October.—Is very violent again. Last night ʒj. of sol. mur. morph. seemed to produce no effect whatever.

14th October.—Same as yesterday.

15th October.—Last night ʒj. of sol. mur. morph. was given at 8 P.M., and followed by 30 grs. of chloral hydrate at 11 P.M. She fell asleep at 11.30 P.M., and slept for six hours. She also slept for two hours in the forenoon without the aid of any hypnotic.

20th October.—Patient has remained free from violence since last note. Was able to talk rationally at times, but often expressed delusions. She has taken a good supply of food, and has slept well without medicine.

21st October.—To-day patient is free from all symptoms of mental disturbance, and speaks regretfully of the "trouble she has caused," etc. The scarlet rash had entirely faded by the end of the first week after admission, and desquamation had gradually spread all over the body.

One attendant now remained with her for ten days more, till the desquamation of the cuticle was completed, and the patient was then discharged recovered.

Mrs H. was at an age when scarlet fever is rare; and although there had been some cases of it two months before in the village where she stayed, there were no other cases of the disease known to exist in the village between that time and the day of her admission to the asylum. The very marked maniacal symptoms were probably not a mere coincidence, but due to the action of the scarlatinal poison in some way upon the mind-tissue.

The rarity of a case such as the above may be reasonably inferred from the fact that none of the authorities I have been able to consult (including Trousseau and Niemeyer) mention acute mania as being amongst the complications of scarlet fever.

A case of "Mania after Scarlatina" is noticed in the *Medical News,* January 7, 1882, p. 15.

ARTICLE VIII.—*Case of Paralysis of Musculo-Spiral Nerve from Pressure of Fragment of Bone; Excision of Fragment; Recovery.* By JAMES WHITSON, M.D., F.F.P.S.G., Extra Dispensary Surgeon, Glasgow Royal Infirmary.

THE subject of pressure on nerves is one of great importance, involving as it does complete loss of power and sensation in the parts supplied. Where it can be carried out, the first duty of the surgeon is to remove the cause of the pressure, and thus afford the nerve fibres an opportunity of recovering their power. It occasionally happens that the musculo-spiral nerve becomes paralyzed in consequence of fracture of the shaft of the humerus. The paralysis, under these circumstances, may take place in one of two ways. Callus may be thrown out to such an extent as to cause pressure on the nerve, or a projecting fragment of bone may push it aside and put it so far on the stretch as to destroy its functions.

A case of the former kind is recorded in Agnew's *Surgery,* where so much callus was thrown out as to render the arm and hand useless. As the callus became absorbed, however, an improvement took place, and in the course of time the affected parts gradually recovered themselves. In the later editions of Erichsen's *Surgery* mention is made of a case which occurred in the practice of Ollier of Lyons, in which the pressure of a projecting fragment of bone caused paralysis of the musculo-spiral nerve. Ollier cut down on this fragment, and removed it, with a successful result.

A case similar to the last one having recently come under my own notice, I beg to give the following particulars:—Michael G., while working in the hold of a vessel, had his left arm fractured, in July 1881, by the falling of a log of timber. It was put up in splints at the time by a medical man in the country; and though bony union had taken place, the forearm, thumb, and wrist remained quite powerless. The fingers were cold and benumbed, and the hand drooped. On examining the upper arm, a spiculum of bone was found about three inches above the elbow, which projected in an oblique direction. It was evident from the symptoms which were evinced in the forearm, as well as from the position of the projecting fragment of bone, that the musculo-spiral nerve was pressed on. It was determined, therefore, to remove the pressure on the nerve by excision of the projecting fragment. Accordingly on 23rd November, the patient having been put under chloroform, a dissection was made in order to freely expose the position of the structures. The nerve was found to be partially enclosed in an osseous groove formed in this fragment, and so much pressure had been exercised upon it that it was distinctly thinned at that point. The nerve was then removed from the osseous bed in which it was partly imprisoned, and being held aside, the projecting fragment was removed by the chisel. The irregularities on the humerus at this point were pared down so as to make them level with the normal contour of the shaft. The edges of the wound were brought together with wire sutures, and it was dressed with protective plaster and gauze. A splint of Gooch, with a joint at the elbow, was applied in order to fix the arm. This was removed and the wound was redressed every alternate day. Two days after the operation the patient was asked if he had any more power in his forearm or hand. He at once said he could move his thumb and fingers more freely than at any time since the accident. A fortnight afterwards the stitches were removed, and satisfactory progress was reported. Fingers, thumb, and arm were all becoming stronger, and the sensation was improved. Within five weeks of the operation the grasp of the hand had considerably strengthened. The mobility of the fingers had greatly increased, and the patient could button his clothes, and retain small objects between his finger and thumb. The temperature of the hand and fingers was normal, and the sensation was much improved. The incision had healed, and the patient proposed resuming work shortly.

ARTICLE IX.—*Surgical Notes.* By JAMES MURRAY, M.A., M.D. Edin., Surgeon to Inverness Northern Infirmary.

THE following cases of surgical interest came under my care, while acting as surgeon to the Inverness Infirmary:—

CASE I.—*Sarcoma of the Foot, requiring Amputation above the Ankle.*

Mary Macdonald, out-door worker, aged 46, unmarried, admitted to the Infirmary on 30th April 1880, with an ulcerated growth on the heel.

About a year ago patient felt a small growth, about the size of a pea, under the skin of the heel. It gave rise to no pain, save on walking. The growth gradually increased, and in January 1880 it burst through the skin. There was no history of injury. On examination an ulcerated, fungous like growth, about the size of a raspberry, is seen on the sole of the foot near the heel, which invades the surrounding tissues, and is adherent to the plantar fascia. No enlargement of glands in the groin or elsewhere can be felt.

On May 6th the growth was removed by an elliptical incision, which went wide of the diseased mass. On microscopic examination the tumour was found to be a round-celled sarcoma. The cavity left behind slowly filled up with granulation tissue, and, just as it was closing, fresh tubercles of the disease appeared. Excision was again resorted to, but in a few weeks was followed by a recurrence of the disease, which this time appeared over the heel. The patient complained of no pain, and was otherwise in fairly good health. It was pointed out to her that in order to prevent further spread of the disease it would be necessary to amputate above the ankle. To this the patient demurred at the time, but four months afterwards she consented. The leg was amputated, with antiseptic precautions, in its lower third, by two equilateral flaps cut from without inwards, according to the method of Mr Cocks of Guy's Hospital. The stump healed by primary union in fourteen days, and only required four antiseptic dressings. Some months after the operation the patient was able to move about by the aid of an artificial limb, and I was in hopes that there would be no recurrence of the disease. A few weeks ago, just a year since the operation, the patient suddenly became very weak; and small growths, some the size of a pea, others of a marble, appeared all over the body, in the skin and subcutaneous tissues. In fact, widespread dissemination of the disease has occurred, which will soon prove fatal.

Remarks.—In the few cases which I have now observed of sarcomatous tumour growing in the soft parts of the foot, there has always been a recurrence of the disease after a limited interval of time, even though amputation has been resorted to at an early stage. Mr Henry T. Butlin, of St Bartholomew's, London, in his lectures "On the Relation of Sarcoma to Carcinoma," points out that the danger of recurrence after removal, in the case of sarcomatous growths, is greater when situated in the soft parts than in bone.

CASE II.—*Gunshot Injury of the Leg, with Nerve Laceration.*

John Pringle, farm manager, admitted 5th May 1880. On the day of admission the patient was accidentally shot in the right leg by one of the keepers, who was shooting rabbits at the time. On examination there was a deep, lacerated, and contused wound on the outer side of the right leg. There was scarcely any bleeding. On exploration with the finger, the soft tissues were found much injured. The knee-joint was untouched. A few spicules of bone were felt at the bottom of the wound, which resulted from the shot grazing the upper end of the fibula, but there was no fracture. The wound was syringed with carbolic lotion (1 to 20 strength), dressed antiseptically, and put up in a Macintyre splint. About a month after admission, it was noticed that the patient had loss of power over the extensor movements of the toes and flexion of the ankle-joint, along with loss of sensibility in the skin covering most of the dorsum of the foot, and that over the lower portion of the front of the leg. It was then seen that the shot must have lacerated the fibres of the external popliteal nerve, as it winds round below the head of the fibula, before it breaks up into its two branches, the anterior tibial and musculo-cutaneous nerve, which supply the muscle and skin on the front of the leg and dorsum of the foot.

Owing to disturbance with the vaso-motor nerves, there was a puffy œdema over the dorsum of the foot; and owing to the loss of nerve supply to the skin, the wound in the leg was extremely slow in healing.

By the aid of friction and the battery, the motor and sensory nerve functions became slightly improved; but on leaving the Hospital, on 3rd July, the patient could not properly extend the toes, or flex the ankle, and consequently dragged the foot as he walked. Otherwise he made a good recovery.

CASE III.—*Simple Comminuted Fracture of Thigh, accompanied by Traumatic Delirium.*

William Johnstone, aged 65, a ferryman, admitted 8th June 1880 with a simple comminuted fracture of the left thigh, caused by a box falling from a lorry on to his limb. The fracture was put up with Gooch splints and extension apparatus. On the third night after admission patient became wildly delirious, tossed off the splints, and tumbled out of bed.

Chloral in 30-grain doses was administered, which quieted him down for a few hours; but on recovering from the effects of the drug he became more violent than ever. On inquiring into patient's habits, it was found that he was a "tippler" who was at all times of the day tasting whisky. The sudden cessation of his accustomed dose of alcohol after admission to Hospital brought on delirium traumaticum potatorum. It was found that the delirium would not leave him until so many ounces of whisky were administered to him per diem. He eventually did well.

Should a similar case come under my care again, I would at once administer stimulants. The patient William Johnstone ran a narrow risk of turning the simple into a compound fracture, by his tossing about in his delirium with the fracture apparatus off the limb. It seems strange that the treatment of sudden total abstinence from alcoholic stimulants, as is carried out successfully in ordinary cases of delirium tremens, should not suit cases of traumatic delirium, but so it is.

CASE IV.—*Abscess in Abdominal Wall simulating Ventral Hernia.*

Janet Maclachlan, aged 65, admitted 19th October 1881, complaining of severe pain in the umbilical region.

Patient states that her bowels were not moved for the last fortnight, that a week ago she began to feel severe pain in the bowels, which was greatly increased on movement, and noticed a swelling a little below the navel. The pain has been so great that she has had little or no sleep at night. She has felt sick, but has not vomited.

State on Admission.—Pulse is rapid, 120 per minute, and is weak. Temperature is 99°. Tongue much furred and dry. On examination of the abdomen a round swelling is observed a little below the umbilicus, about the size of a saucer, and streaked with dusky red lines.

It is only slightly elevated above the general surface. On coughing, an impulse is communicated to the fingers through the tumour. On light percussion a tympanitic note is elicited. On palpation the circumference of the swelling is hard to the feel. The centre of the swelling communicates a sensation of gurgling to the finger, as if it pressed on a coil of intestine.

The local signs pointed to a strangulated ventral hernia, but not so the constitutional, as there was no vomiting nor great prostration. The absence of vomiting and severe constitutional depression, made me decide to wait for another day before interfering. Pil. opii gr. i. every two hours, opiate fomentations, and a castor-oil enema, were ordered.

On following day I noticed a spot over the swelling which was thinner than elsewhere, and of a blueish appearance.

I then suspected an abscess, though there was no great rise of temperature, no history of rigors, and no dull note on percussion. Next day this spot of skin gave way, and thin brownish pus of a strong fæcal odour came away. This was followed by relief to all the symptoms. The swelling turned out to be an abscess, which formed subacutely in the abdominal wall, and bore a strong resemblance in many of its characters to a strangulated ventral hernia. An abscess in this locality is by no means common, and may, as in this case, closely simulate a hernial protrusion.

CASE V.—*Syme's Amputation for Crushed Foot.*

Kenneth Milligan, aged 14, admitted to Infirmary on 10th September 1881. On the day of his admission patient was working one of the steam-hammers in the Inverness Railway workshops, when, by carelessness on his part, his right foot got caught by the hammer and was severely crushed. On examination of the foot there was no external wound, but the soft parts over the dorsum and plantar surface were much bruised and separated. The phalangeal and metatarsal bones were severely crushed. The foot was in such a state of pulp that there was no chance of saving any portion of it. Syme's amputation was accordingly resorted to, with antiseptic precautions. Except on the evening of the day of operation, the temperature never exceeded 99°. The drainage-tube was removed on the sixth day after operation, as there was no discharge. Afterwards the stitches were gradually loosened and removed. The stump healed by primary union, and required but a few antiseptic dressings.

Case VI.—*Sarcomatous Tumour on the Face.*

Esther Millar, aged 50, admitted 10th August 1881 with a growth lying over the malar bone and in the canine fossa. It began as a small wart about a year ago, and at first grew slowly. During the last three months it has grown rapidly and given rise to excruciating pain. The growth is soft and vascular. On removal it was found to be a round-celled sarcoma. It was removed by Paquelin's thermo-cautery, which is so suitable for burning out malignant tumours situated in the soft parts covering the upper jaw. There was pretty free hæmorrhage from branches of the facial artery, which was controlled by touching the vessels with the knife at a black heat. The wound healed up rapidly, and patient has suffered no pain since the operation. She was dismissed cured on 2nd September.

Case VII.—*Scirrhus of Mamma and Uterine Polypus.*

Elizabeth Fowler, aged 50, a widow, who never had children, admitted 10th July 1881 for tumour of the breast. Scirrhus of mamma was diagnosed from the history and examination of the growth. There was little pain, and no enlarged glands in the axilla.

The mammary gland was excised with antiseptic precautions, and the wound completely healed up in seventeen days. The patient had for many years suffered from a growth in the womb, which had been examined by many medical men, but never interfered with. On per vaginam examination a polypoid growth was felt lying in the vagina, and very slightly attached to the cervix uteri. It was readily removed, and turned out to be a uterine polypus in a putrid condition.

Case VIII.—*Amputation at Shoulder for Disease.*

Martha Macpherson, aged 20, admitted 17th May 1880. Eight months previous to this she underwent amputation of the arm in its upper third. The stump never healed up properly, and the pain in it became so intolerable that she again sought admittance to the Infirmary. On examination of the stump, two sinuses were found which led up to decayed, spongy bone. An attempt was made to remove portions of dead bone, and to heal the sinuses, but no satisfactory result ensued. Amputation at the shoulder-joint had to be resorted to, as the best operation under the circumstances. It was done according to Professor Spence's method, by a linear incision beginning a little external to the coracoid process, carried down to the humeral attachment of the pectoralis major, and then brought fairly across the clavicular fibres of the deltoid and pectoralis major muscle towards the posterior border of the axilla.

Disarticulation was easily performed, and there was scarcely any bleeding, as the axillary artery was well commanded by an assistant and the posterior circumflex was carefully avoided.

The upper portion of the humerus, which was left in the old stump, was found quite necrosed. The wound healed satisfactorily, and a well-formed stump was left.

CASE IX.—*Removal of large Fatty Tumour.*

Malcolm Mackenzie, aged 48, gardener, admitted 19th May 1880 for a tumour of the hip.

On examination a tumour nearly approaching in size to a football is seen in the region of the left hip, lying between the anterior superior spine of the ilium and the great trochanter. The growth is circumscribed and fairly movable. The skin on certain parts is discoloured, and fluctuation can be made out at certain points. It has been growing slowly for eight years. It gives rise to no pain, nor has it injured the health of the patient. Under the spray an incision was made in the long axis of the growth, which allowed the tumour to be easily shelled out of its capsule. There was scarcely any bleeding. It turned out to be an enormous fatty tumour, which had degenerated at certain parts into cysts full of brown gelatinous-like fluid. The wound healed by primary union, and in six weeks after the operation the patient was able to be at his work again.

Part Second.

REVIEWS.

The Opium Question. By Deputy Surgeon-General W. J. MOORE.
Calcutta: P. S. D'Rozario & Co.

THIS seems to be a second article on the above subject, and to be written mainly in answer to a work entitled, "The Indo-British Opium Trade," by Theodore Christlieb, D.D., Ph.D., Bonn.

Translated by David B. Croom, M.D. London: James Nisbet & Co., 1879.

Mr Moore's pamphlet is an attack on Prof. Christlieb, and in our opinion a most unfair one. And we say this deliberately after having carefully read both the works. Mr Moore commences his accusation by placing in inverted commas a sentence which we have been unable to find anywhere in Prof. Christlieb's book. It is quoted (?) as a specimen of sensational writing. If strong language were condemnatory of a cause, then we fear Mr Moore's must be a bad one, for we find him using very strong, and, we consider, most unwarrantable language, such as—"The book" (Dr Christlieb's) "in short may be described by the following sentence:—A dish of sensational fallacies rendered digestible by a garnish of truth" (p. 2); or this, "Probably the fact of the floods" (in India causing famine) "was not known to the authors of the Indo-British opium trade, or with characteristic impudence or ignorance some intimate connexion would have been insinuated." We are sorry that any member of our honourable profession should condescend to such language. We regret to find, however, that Mr Moore farther digresses from honourable warfare. We have carefully compared his quotations with the original, and found many of them incorrect. In some the difference is trifling, but in others not so. For instance, the sentence referred to above. But that in which we think Mr Moore is most frequently unfair is in crediting Prof. Christlieb with statements which are quoted from others. The unfairness is twofold—first, Prof. Christlieb is made to stand responsible for opinions which are advanced by others, and in the second place, the reader is led to believe that these opinions are merely the productions of a visionary, who knows nothing practically of the subject on which he is writing, whereas they are quoted from the best authorities who have spoken or written on the subject. Prof. Christlieb, like most writers of his nation, quotes largely from all sources, and gives his authority most accurately and copiously, from *The Times*, Dr Turner, Dr Dudgeon, Mr Bruce, the Superintendent of Commerce, Bishop of Salford, and others.

We thank Mr Moore for having directed our attention to Prof. Christlieb's work. We have found it most interesting and convincing, and most valuable on account of the number of quotations in it, and references to valuable documents, such as Parliamentary papers, treaties with China, debates in Parliament, speeches on the opium question by Mr Gladstone, Lord Shaftesbury, and others, reports on Indian agriculture, famine, etc., pamphlets, letters to the *Times*, and other productions bearing on the subject too numerous to name.

Mr Moore's principal arguments against the anti-opium trade writers are:—first, that "no mention is made of opium being imported to China long before the British commenced to trade." At pages 9 and 10 of his book, Prof. Christlieb says, "As far back as the reign of Wan-leih (1573–1630) opium seems to have been employed as an astringent and sedative medicine . . . . . and the trade was carried on quite legally by the *Portuguese;*" secondly, Mr Moore says, "No mention is made of the real reason why the Chinese Government endeavoured to prohibit the opium trade, as indeed all other trade, viz., the fear of the drain of silver from the country. . . . . . A statement quite contrary to fact is, however, made, viz., that the opium trade was at last legalized in direct opposition to the wishes of the Chinese people." Prof. Christlieb does not specially refer to the fear of the Chinese government to a drain on their silver, but the idea of such a fear can be easily understood. Doubtless he did not refer to it prominently, because he had a far better and stronger reason to advance—that which is characterized by Mr Moore as contrary to fact—viz., the strong aversion to the opium trade on the part of both Government and people. And he proves his statement upon the authority of facts. At page 71 we read, "Dr Lord, the American Consul at Ning-Po, speaks, therefore, with perfect truth when he assures us that the Chinese generally, not excepting the opium smokers themselves in their rational moments, would vote for the total abolition of opium." And again, at page 89, we find the following statement from the report of a meeting where a deputation from the Anti-Opium Society, headed by the Earl of Shaftesbury, waited upon the Chinese Ambassadors Kwo and Lin,—"Their excellencies replied, that now as always China had considered the importation of opium as an evil, and that the Government was perfectly sincere in its desire to put it down."

Mr Moore argues because the Chinese smoke opium and will continue to smoke opium, that, therefore, they cannot be against the trade. He forgets that one of the peculiarities of this terribly enslaving vice is, that the victims are aware of their slavery, and yet cannot free themselves, though they thoroughly hate and abhor their enslaver. The last argument of Mr Moore's on which we shall touch is his statement that opium is a good thing used in moderation. It is difficult to define what any one may mean by "moderation," but we gather from several statements in Mr Moore's brochure, and from its general tone, that he means something more than the mere medicinal use of opium. This opinion he supports by only one reference to professional experience or observation that we could see, viz., that during the famine in India, "as a matter of fact opium proved the salvation of many; it enabled them to bear up against hardships which they could not otherwise have withstood." As the testimony of a medical man we must give all due respect to such a statement, at the same time we would say that those who were thus enabled to bear up against hunger and privations must have been already accustomed to the drug. And we would farther say in Prof. Christlieb's line of argument—better to have the ground at present devoted to the cultivation of opium cropped with grain, which would help against the occurrence of the famines. Mr Moore seems to consider that the evils of opium-eating are exaggerated, and that they might be balanced by the advantage alluded to above of being able to bear up against a possible famine. We beg to differ most emphatically. We believe the evils of opium eating and smoking to be both real and most terrible, and we recommend Mr Moore to study the statements of such practical writers as Dr Dudgeon of China, and the many American medical men whose works have been recently reviewed in this Journal.

Pathology, Past and Present: an Introductory Lecture, delivered October 26th, 1881. By W. S. GREENFIELD, M.D., F.R.C.P. Lond., Professor of General Pathology, University of Edinburgh.

As a rule there is little scope for the critic in an introductory lecture. Still a short notice of Professor Greenfield's address, on such a comprehensive title, may be useful. Having referred to his predecessors in the Chair, defined pathology, and traced the history of morbid anatomy from the time of Hippocrates until the foundation of his Chair in 1831, by mentioning the names of the leading authors on the Continent and in this country, he gives a sketch of modern pathology. He says, "It is unquestionably to Virchow that we owe the great advance by which histology came to take a first rank as an aid to pathology, and from the date of his great work on *Cellular Pathology* (1858) we may reckon the era of modern pathology." This is not the place to enter into any discussion as to the truth or value of the Cellular, Molecular, or any other theory, but it must be confessed that any one giving a history of the progress of pathology from that Chair in the University of Edinburgh might have been expected to have given Edinburgh what credit was due to her in furthering its study. Nevertheless, so far as one can learn from Professor Greenfield's address, Edinburgh has still to make her reputation as regards pathology. What are the facts? Let us take only one name from the Edinburgh school. In 1841 Bennett began a course of lectures "On the Minute Structure of Organized Tissues, with reference to Anatomy, Physiology, Pathology, and the Diagnosis of Disease." Professor Greenfield, at p. 35, thus speaks: "But I say with some confidence that, with one or two exceptions, there has scarcely existed, if there does now exist, in the London medical schools any course in which pathological histology is systematically taught so as to comprehend a practical study of the principal changes in all the important organs." Thus it would appear, if Professor Greenfield be correct, that even to-day few London students have such an opportunity of studying pathological histology as Edinburgh students had forty years ago.

Dr Andrew Clark, in presenting Bennett's bust to the University of Edinburgh in August 1875, said, "Probably he (Bennett) has made more original inquirers and given a greater impetus to exactness of inquiry in pathological histology, than any other medical teacher in the empire. As a pathologist and as a physician he has made his mark upon the theories and the practice of these days. For the last quarter of a century there have been few additions to our knowledge and few improvements in our art in which he has not taken some share. He is, indeed, the father of *pathological histology* in this country, and has managed to steer a middle and, as I think, a just course between the extravagant extremes of Rokitansky and of Virchow. By his studies of inflammation as a process of abnormal nutrition he opened new paths of inquiry and started trains of thought leading to discoveries of which we as yet cannot discern the end. He has shown that disease is not a new or a foreign thing, but a series of altered states; that the laws which regulate the evolution of normal products are the very same laws which, in different conditions, regulate the evolution of morbid products; that between physiology and pathology there is an unbroken continuity, and that for all the purposes of our art and its progress both are to be treated after the same fashion." Compare that statement of what has been shown by an Edinburgh pathologist with Professor Greenfield's own words from page 22. He says, "If I were asked what is the present standpoint of pathology? I would unhesitatingly say that it is the physiological, or, if you will, the biological standpoint. In other words, pathology is governed by no theory and limited by no methods other than those which equally govern and limit physiology. If a cellular physiology could suffice to explain all the phenomena of healthy life, a cellular pathology might equally serve for disease life. And whatever method or instrument of research is requisite for the full investigation of the phenomena of healthy life in all its manifestations is equally or still more requisite for studying the phenomena of disease life." Plagiarism is out of the question, and, nevertheless, there is a striking resemblance between what Bennett's researches have shown and what Professor Greenfield believes to be the present standpoint of pathology. Space would fail me to tell all the work of this one Edinburgh pathologist, but it is to be hoped that enough has been said to show that Edinburgh deserves at least some mention in any history, however brief, of modern pathology, and to convince Professor Greenfield that some additions might with advantage be made to his elaborate address.

Text-Book of Modern Midwifery. By RODNEY GLISAN, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Williamette University, and late President of the Oregon State Medical Society. Philadelphia: Presley Blakiston: 1881.

WE learn from the preface that the author's desire is that his book should supplant those of Leishman, Playfair, Cazeaux, and Schroeder, which are at present used by the American student, and also that it "shall more thoroughly represent American obstetric practice." After looking through it pretty carefully, we see no reason why it should be preferred to the books mentioned. Indeed, so frequently are these and other authors referred to and quoted, that we should think the American student will still make use of one or other of their books in preference to the one before us, the style of which may be roughly said to be all through its pages as follows:—"On this disputed point we find Drs A., B., C., and D. supporting the positive side and saying so and so, while E., F., G., and H. are certain that the truth of the matter lies on the negative side." The title, too, might be well altered to "A Modern Text-Book of Midwifery," as a perusal of the chapters on the Mechanism of Labour, on Rupture of the Uterus, and on Deformities of the Pelvis and the Mechanism of Labour in such cases, will convince any one that the title of modern midwifery is a misnomer. How far the author has succeeded in the latter of his intentions, representing American practice, we are unable to say, but we have not noticed anything strikingly at variance with the subject matter of European text-books, except, perhaps, one or two passages like the following, which remind one faintly of Mark Twain and other American humorists. After likening spermatozoa to "those ethereal wanderers, the comets, that at long intervals of time show themselves to our astonished gaze," he warns his readers that it is not in size that the likeness lies, and says, "Although insignificant in size, they are capable of more good or evil, as the case may be, to the human race than all the comets that ever flashed through universal space," and so on, with some equally out-of-place remarks about their "being allowed to range the sacred precincts of virginity in a wicked and unlawful manner." Then, again, speaking of resistent hymen, he says, "The newly-married man, however, generally manages to get along under these circumstances without surgical assistance." Looking at the book in detail, it is one that readily lends itself to criticism and correction; but as we do not for a minute expect that the work will ever be used by half a dozen men in this country, it is needless to pursue the matter further.

Notes on Midwifery. Specially designed to assist the Student in preparing for Examination. By J. J. Reynolds, M.R.C.S. Eng. London: J. & A. Churchill: 1881.

This book is one of a class to which very serious objection may be taken. It is, as the author says in his preface, a compilation, intended—1st, To methodize knowledge; 2nd, To refresh the memory on some easily forgotten points; and 3rd, To economize time at a critical period. Now, every good student, when reading for an examination, does something for himself of the sort attempted by the author, or at least he gets into the way of turning over the leaves of his text-book and picking out just such headings and little pieces as these notes supply. For any one, then, who has conscientiously got up his work no such notes will be required, and it is to the lazy man that they really appeal and afford an easy means of "cramming," for the day of examination, such points as he is likely to be questioned upon. The habit of "cramming," it strikes us, is already too common, and any further temptation to it, as is offered by condensing the subject of Midwifery into some 130 widely-printed pages, should not be encouraged.

The book is, as the author states, chiefly a compilation from Playfair, Leishman, and Braxton Hicks; but we were hardly prepared, even with this avowal, to find, after subtracting from the 134 pages 24 for blanks and room occupied by diagrams, that over 21, or just one-fifth of the whole, consists of verbatim extracts, These form, however, decidedly the best part of the book, as we find, on examining the author's own part,—along with several inaccuracies in spelling and grammar,—instances of faulty description and of omission which greatly impair the value of the production, whatever that may be.

A table of the appearance of the fœtus at each month, and a description of the skull, are all that are given under anatomy and physiology of the fœtus, while the placenta, membranes, circulation, etc., are never alluded to. His description of the delivery of an aftercoming head is very faulty. First, he says, carry the body well over the mother's abdomen, and if this fail put two fingers over the occiput and two of the other hand in the mouth, and deliver as in the diagram given, where the body is shown dangling backwards. With such teaching we are afraid men would frequently have to fall back on his third method—the forceps—a method never really required, and sufficiently dangerous to warrant its disuse. Among the fifteen causes he gives for rupture of the uterus, no mention is made of prolongation of the labour as a cause *per se*, nor, under treatment, does the word "drainage" occur. Further on we find the placenta spoken of in prævia cases as being attached wholly or partially to the cervix! And again, after describing shortly eleven varieties of deformed pelvis, no mention is made of the effect of any one of them on the mechanism of labour.

For Scotch students, at any rate, who as a rule attend a six months' course on midwifery, we do not think these notes will be found to be of the slightest use.

How to Use the Forceps: with an Introductory Account of the Female Pelvis and the Mechanism of Delivery. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Children in Starling Medical College. Illustrated. New York: E. B. Treat, 757 Broadway: 1880.

What the author terms an "Introductory Account" occupies half the book, and is in reality a masterly treatise on the mechanism of labour, in which he combats a good many old-established doctrines, and brings forward a new and very taking idea in regard to the conception of the pelvis. His style is so concise, and the diagrams so essential to the understanding of the text, that it would be impossible to give, in the scope of a review, his peculiar views. Briefly, however, according to the writer, the pelvic canal is not to be considered as a single tube, but as two, partially separated above and completely blended below. The plane of each lateral tube has an elliptical outline, and is bounded by the side of the pelvis and an imaginary curved line having for its two ends the centre of the promontory of the sacrum and a point a little to the opposite side of the symphisis pubis. It will be thus seen that the planes of the two sides at the inlet overlap each other in front. He also states that these planes are not parallel, but that they rise towards the middle line and approach each other at an angle of 150°. Arguing from this description, he rightly says that there can be no plane of the inlet as usually described, as the points bounding it are situated at different levels.

In treating of the mechanism of labour he insists that the head enters in one or other of those two planes of the inlet, consequently to one or other side of the pelvis; but we must refer the reader to the original, for the reasons we have already given. Indeed, this introductory part contains much to commend and little to criticise. He enters at some length into the mechanism of occipito-posterior cases, and the way that he uses his theory as to the two-fold nature of the pelvic canal, to get over the difficulty offered by the ischial spines to rotation, is ingenious. We may here remark that he revives the dogma that these spines, or rather what he calls the ilio-sciatic lines, are the main factors in determining rotation.

Dr Landis begins the second part of his book by a description of the Davis forceps, which evidently comes up to his ideal of what the instrument should be. Its chief peculiarities are a slot and groove lock, an increase in the pelvic curve, obtained by carrying downwards the posterior limb of the blade, and a twisting or curving inwards of the anterior edge of the blades so that their tips are half an inch apart when closed. He insists that the forceps should be applied in relation to the child's head, except where this is impossible from deformity of the pelvis ; but in spite of the formidable array of reasons he gives, and while granting him that such an application is theoretically the better, we cannot think with him that it is a matter of perfect ease in all cases. As to the direction and method of traction, he advises that one hand be used to press on the anterior edges of the blades, and at the same time to act as a fulcrum round which force may be applied by the other hand on the handles. We are glad to see, too, how strenuously he forbids the use of any pendulum motion or so-called leverage. No mechanical gain, he says, can be derived from this, "unless the laws of mechanics are altered for the benefit of obstetricians." That his own method, however, of flexing and rotating the head by securely seizing it in the grasp of the powerful Davis forceps and applying appropriate force, is as devoid of danger as he claims, we are not quite disposed to admit. We quote his mention of Tarnier's forceps : "Among the first to have a practical doubt as to the possibility of making traction upon the handles in the proper direction was Tarnier, who accordingly invented a pair of forceps with a considerable pelvic curve, which was fitted with steel rods affixed to the lower edge of the blades, so that we could pull in the line of the blades and not in that of the handles. This is an unnecessarily ingenious contrivance, since we possess in the ordinary forceps all that is necessary if we will use them correctly." The remainder of the book is taken up by a series of very good rules for the conducting of forceps operations, and also as to when the forceps should be employed.

The work is original and at the same time practical, and is clearly written throughout. We would recommend its perusal to any one who would like to understand aright how to use the forceps.

Transactions of the American Gynecological Society. Vol. V. For the Year 1880. Boston: Houghton, Mifflin, & Co.: 1881.

THE Society that issues the above volume is a close corporation of sixty, and each new entrant must satisfy the council as to his character and standing, in what way is not very evident, and as to his professional attainments by sending in a thesis for approval. The meetings are held annually in various cities, and the average attendance seems to be from twenty to thirty. In the presidential address Dr Marion Sims advocates a considerable widening of the Society's basis and the removal of several restrictive bye-laws. However the members may find the constitution to work, we must say that the Transactions issued yearly by the Society form one of the most valuable publications in the department of gynecology. One feature, established some three years ago, is the annual index of the gynecological and obstetric literature of all countries for the previous year, compiled with the assistance of Dr Billings, of the Washington State Library. The index is really what it professes to be, and the arrangement of it is excellent. As to the papers, we do not propose to do more than mention the titles. On subjects relating to abdominal surgery we have, "What is the Proper Field for Battey's Operation?" by Battey himself; "Two Cases of Removal of the Ovaries for Anterior Displacement simulating Inguinal Hernia," by Engelmann; "The Successful Extirpation of an Encephaloid Kidney," by Dr Byford; "Ovariotomy during Pregnancy," by Dr Wilson; "Two Fatal Cases of Rupture of the Uterus with Laparatomy," by Dr Howard; and "Laparatomy and Laparo-Hysterotomy: their Indications and Statistics for Fibroids," by Dr Palmer. The longest paper in the series is one by Engelmann, entitled "Posture in Labour: an Ethnological Study," which is very exhaustive and profusely illustrated, and forms very interesting reading. The primitive posture, according to the writer, is reclining on the back, with the shoulders slightly raised, and to this position he recommends that we should return. The remainder of the papers are on clinical and therapeutical subjects, among the latter one on "Uterine Massage as a Means of treating certain Forms of Uterine Enlargement," in which Dr Reeves Jackson describes various ways of kneading the uterus, some of which strike us as being open to serious moral objection.

The get-up of the book as to paper, printing, and binding is much better than we are used to in medical publishing. And even apart from the valuable papers it contains, the index, embracing as it does the whole departmental literature for a year,—treatises, journal papers, and pamphlets,—is sufficient of itself to recommend the volume to all interested in the specialty of women's diseases, and to induce them to add it to their libraries.

The Mechanical Treatment of Hip-Disease, with Special Reference to the Value of Traction. By A. B. JUDSON, M.D. New York: 1881.

HIP-DISEASE, like fracture of the lower end of the radius, seems to be treated differently by almost every surgeon. This would lead one to suppose that we have not yet reached a knowledge of the true pathology of these affections. One reason for this diversity of treatment will be plain to all who have seen the practice of different surgeons, that the results obtained are not invariably satisfactory. A surgeon has some success with a particular method of treatment, and he immediately begins to have faith in it. After a while success is not so invariable, and the surgeon is perhaps induced to invent some method of his own, to modify the original method, or to try some other.

We should imagine it quite a puzzle to an observant student, who has attended the practice of a large hospital, to have to decide which line of treatment he shall adopt for his own patients.

The treatment of hip-disease by extension has been extolled and criticized thoroughly.

The impossibility of separating the articular surfaces of the joint, except in cases of advanced disease; the apparent absurdity of trying to counteract the muscles by dragging on the skin; the impossibility of keeping the joint thoroughly at rest;—all these have been pointed out and dwelt upon, and yet extension (by some special apparatus or other) is the favourite method of treatment.

Dr Judson, whose pamphlet is before us, advances as his reason for employing extension that it "secures fixation." Now, we still believe what we were taught by the late Mr Syme, that you cannot secure complete rigidity of any joint unless you command the joints immediately above and below it. At the same time we are prepared to admit that probably the influence of extension over the movements of the hip-joint has been overlooked in the prominence given to traction on the muscles.

Dr Judson approves of extension by means of Thomas's splint, which permits the patient to go about while the hip is extended and at rest.

That this apparatus can secure complete fixation we do not admit, for the reason above stated, but that a considerable amount of rest to the joint is procured, and consequently a satisfactory issue favoured, we are glad to admit. Dr Judson's paper, though short, is well written and practical.

Hip-Joint Disease—Death in Early Stage from Tubercular Meningitis. By DE FOREST-WILLARD, M.D., and E. O. SHAKESPEARE, M.D. Cambridge, Mass., U.S.A.: 1881.

FROM the careful examination of sections from the diseased joint, conducted by Dr Shakespeare, the conclusions drawn are, "that the intensity of the disease in this case mainly affected the synovial membrane and the ligamentum teres; that the lesions found may be regarded as constituting the first or initial stage of at least one form of hip-joint disease; and that the history of the case, both clinical and pathological, would seem to support the views of those who defend the doctrine that in a certain depraved animal organism inflammatory products tend to caseous degenerations, which may ultimately cause a local or general infection of the various tissues of the animal, and a limited or extensive eruption of tubercles."

All such cases as the above—carefully investigated and reported—we welcome as being valuable additions to surgical pathology, and consequently valuable aids to scientific treatment of surgical affections.

An Improved Method of Treating Depressed Fractures of the Nasal Bones. By Lewis D. Mason, M.D., Brooklyn.

The method is simple, being merely the replacing of the fragments into position, and then the passing of a needle or pin (plated to prevent irritation) from side to side, as far back as possible, to support the comminuted bones.

Several cases are reported in which the method was a success.

Medical Electricity; a Practical Treatise. By Roberts Bartholow, A.M., M.D. London: Henry Kimpton: 1881.

The development of the applications of electricity characterizes our generation as markedly on its physical side as did the use of steam that of our fathers. Medicine necessarily lays all physical science under contribution, and has not neglected electricity. The numerous works which appear on the medical and surgical applications of the force testify at once to the interest which the subject excites and to the utility of the agent in treatment and diagnosis. This treatise by Dr Bartholow is intended as a text-book for students, but is meant also to aid the practitioner in his daily work. It probably fulfils the writer's intention better than any of the numerous hand-books which have hitherto appeared.

There are portions of the work in which the explanations are unsatisfactory—in the definition, for example, of electrical measures of capacity; but, taken as a whole, the book is written with great clearness and intelligence. It is exceedingly difficult, in a work on medical electricity, to discuss properly the subject of electro-physics. It must be taken for granted that the reader is entirely ignorant; and yet, unless the work is to extend to a quite unwieldy size, great condensation must be practised, and only those points examined which are essential to the proper comprehension of electro-physiology and therapeutics. It will be found that this is the least satisfactory part of our medical hand-books, and Dr Bartholow's work is no exception to the rule, although certainly much above the average.

In another respect, also, it fails with its fellows. The comparative appreciation of electrical therapeutics is to a certain extent neglected. So far as experience may teach, rules for the mode and kind of application are explained with much greater definiteness than is at all common, but the practitioner wants to know under what circumstances he ought to employ electricity in preference to other remedies. It is not enough to say, "Galvanism is useful in sciatica or nævus." An attempt ought to be made to define the cases most suitable for it, and the remedies to which it should be preferred or postponed.

On the whole, however, Dr Bartholow's hand-book is, considering the changeful and difficult subject matter, an excellent compilation.

The New Sydenham Society's Lexicon of Medicine and the Allied Sciences. By HENRY POWER, M.B., and LEONARD W. SEDGWICK, M.D. Fifth Part: CAF–CET. Completion of Vol. I. London: The New Sydenham Society: 1881.

WE have much pleasure in recommending to our readers this part of the *New Sydenham Society's Lexicon of Medicine and the Allied Sciences.* The definitions are briefly expressed, and, on the whole, accurately given. We regret that all the *parts* have not been sent us, that we might have given our readers an estimate of the whole work, the first volume of which has now been completed. If the fifth part correctly represents the merits of the work, we have no hesitation in stating that the Lexicon, when completed, will be most valuable as a work of reference.

Vignettes from Nature. By GRANT ALLEN. London: Chatto and Windus: 1881.

THIS volume is a companion to the *Evolutionist at Large,* recently published by Mr Allen. It consists of a series of short, popularly-written essays on biology. Their style is somewhat novel; for the author selects a familiar object, such as a nettle, a hedgehog's hole, a bit of speedwell, a Guelder rose, a mountain tarn, etc., and in very sprightly and interesting language works out the evolution of these natural objects. The essays originally appeared in the *Pall Mall Gazette,* and this fact may possibly account for their somewhat fragmentary character. But the author's style is so captivating that we are tempted to wish the "vignettes" had been expanded to form more perfect portraits. The student of zoology will feel a deep interest in such a work as this, because, in a singularly easy fashion, it lays before him the prevailing scientific aspects of the origin of animals and plants. The essays on "A Hedgehog's Hole" and that on "Seaside Weeds" are perhaps the best examples of the author's lucid style. Here and there Mr Allen glides unconsciously into technicalities which should have been translated into language appreciable by the popular reader. For example, to speak of "conifers with their tough capillary leaves," or to tell the reader about "primitive insectivores" which "grew into nascent carnivores and nascent ungulates," are modes of expression rather calculated to repel than to attract the cultured but non-technical mind for whom the work is intended. But despite these occasional defects we can cordially commend *Vignettes from Nature* as a charming companion. There are few books which will so well repay the medical student, busy with his zoology and botany, for a careful perusal.

Fashion and Deformity. By Professor FLOWER, F.R.S. (Nature Series.) London: Macmillan: 1881.

PROFESSOR FLOWER did well to reproduce in this neat little volume his interesting lecture delivered at the Royal Institution. We expect this book will form an authority with every health-lecturer for some time to come. The illustrations greatly enhance its value, and are clearly printed. There is a literal wealth of information contained in Professor Flower's pages which ought to interest every intelligent person. Every mother should peruse this work; and "young men and maidens" might learn in half an hour's perusal of Dr Flower's teachings, more practical and personal anatomy, and more health-knowledge, than years of reiteration of popular truisms about health will confer. The satire on the fashionable wasp-waist and on the high-heeled boots of the present day is of highly exhilarating nature. This is a book which should be read in schools, and which should be in every drawing-room—not to be laid on the table, but to be read and inwardly digested as well.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING III.

Wednesday, 18*th January* 1882.—Dr P. H. WATSON, *Retiring President, in the Chair.*

I. *Dr Byrom Bramwell* showed (1.) a PATIENT who had come under his notice at the dispensary for a dislocation of his shoulder, and who presented the extremely rare form of congenital misplacement of the heart in which the organ is *situated on the right side of the body, and in which the liver remains in its natural position.* There was no history of any affection of the lung, and there were no symptoms of thoracic disease. The case seemed congenital. There was a diffuse pulsation over the right side of the front of the chest, the maximum intensity of which was a point about an inch to the outside of the nipple. On inspecting the chest a depression in the usual position of the heart was observed. So far as could be made out, the case was not one of complete transposition of the viscera, as the liver lay in its usual position on the right side. On measuring the chest the right side was found to be fully half an inch more than the left all the way down. (2.) A

PATIENT, 70 years of age, who for the past twenty years had suffered from an aneurism of the left common carotid artery, and who had nevertheless been able to follow the occupation of a labourer. Twenty years ago he fell out of a light cart, one of the wheels passing over his neck. The injury was followed by considerable swelling in the neck just over the region of the left carotid artery. A doctor to whom he applied told him that he was suffering from aneurism. He went to Dublin, where he saw a great many doctors; in fact, he seemed to be regarded as a medical curiosity, and he was admitted to an hospital. Hearing, however, that an operation was to be performed, he left the institution. The swelling, which was five or six times its present size, gradually diminished till it reached its present size, pretty nearly equal to that of a large egg. The swelling is pretty hard, globular, and pulsating; it is situated just over the course of the artery, and seems to be connected with it. On auscultation over the tumour, a double sound of a dull, muffled character is audible. Looking at the past history and the present condition of the case, Dr Bramwell agreed with the opinion of the Dublin surgeons, and thought the case was one of aneurism of the carotid artery. The history of the case, and the fact that the medical men who saw it shortly after the accident diagnosed it as an aneurism, made him inclined to believe that it was a traumatic aneurism of the carotid which seemed to have undergone a natural cure. (3.) TWO PHOTOGRAPHS, showing the hand of a man who, eight years ago, had sustained an injury to his ulnar nerve from a scythe. The appearance was almost exactly similar to that seen in progressive muscular atrophy. There was extension of the first phalanx and flexion of the others. Wasting of the inter-ossei was also marked. The nail of the little finger was absent, and the skin of the little finger was "glossy." Occasionally the patient felt twinges of pain shooting down the course of the ulnar nerve, showing that probably it was not completely divided by the injury. Without the history one would be very apt at first sight to consider the case one of progressive muscular atrophy.

II. *Mr Chiene* showed a RED INDIARUBBER CATHETER he had removed from a bladder where it had lain for twenty days. The patient is a practitioner in Edinburgh, at present in the Fever House, suffering from typhoid fever, under Dr Wyllie's care. On the fourteenth day of the fever he asked the nurse to give him a catheter, as he was suffering from retention. She, thinking that as he was a medical man it would be all right, gave it to him. He passed it, and the water escaped, but the catheter disappeared. He felt it slipping up his urethra into his bladder. Mr Chiene saw him the next day, and examined with sound and lithotrite, but could not feel it. Mr Spence was called in consultation, and also examined him without finding the catheter. The bladder was irritable, and as the fever was then in progress, attempts to remove the instrument were desisted from for a time. In the meantime experiments were made on the cadaver. A similar catheter to the one lost was placed in the bladder, and it was found that the presence of the instrument could not be detected by means of the sound or lithotrite. Mr Chiene also found that he could not seize the catheter if he used the Thompson's scoop lithotrite in the ordinary way. He found that it could best be seized by keeping the instrument in the middle line, holding it upright (in which position the blades were just beyond the neck of the bladder), opening the blades there, then depressing the handle of the instrument, and pushing the lower blade as far along the floor of the bladder as he could get it, and at once shutting them. In this way he laid hold of the catheter five times out of six. Two days ago it was considered safe to anæsthetize the patient. The urethra was dilated up to 18 English, six ounces of a weak solution of carbolic acid were injected, and the lithotrite used in the manner described. The catheter was laid hold of at once and easily withdrawn. It was grasped 3 inches from one extremity, and withdrawn doubled on itself. It was slightly coated with phosphates.

III. *Dr Graham Brown* showed a CARCINOMATOUS UTERUS removed by abdominal section by Professor Simpson. The patient, a woman æt. 69, had come under Dr Brown's care some time before for an ordinary prolapse of the uterus, which was readily replaced and retained in position by a pessary. The pessary was removed one day in October last, and shortly after its removal a copious hæmorrhage from the uterine cavity took place. On per vaginam examination the cervix was found to be soft. There was a certain amount of retroflexion, and the fundus was felt heavy and hard. Professor Simpson saw the case with him afterwards, and confirmed his diagnosis that there was malignant disease of the fundus uteri. To confirm this the patient was put under chloroform some time afterwards, and the cervix dilated to allow of the introduction of the finger into the uterine cavity, when hard masses were felt. She recovered from this minor operation very well, and Professor Simpson performed the abdominal section last Saturday. She seemed to rally well from this, but on the fourth day the temperature went up and she died. What the cause of death was he would not like to say till after the post-mortem examination, which they were to perform that evening.

IV. *Dr Heron Watson*, the retiring President, then read his VALEDICTORY ADDRESS, which will appear in a subsequent number of this Journal.

Dr Wilson, seconded by Mr Annandale, moved a vote of thanks to Dr Watson for his past services. This was agreed to unanimously, and conveyed to Dr Watson by the new President, Dr Balfour, who also returned thanks for the honour they had done him in electing him to the presidential chair.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING II.

Wednesday, 23rd November 1881.—Professor RUSSELL SIMPSON, *President, in the Chair.*

THE office-bearers for the next two years were elected, as follows:—*President*, Professor Simpson; *Vice-Presidents*, Dr James Carmichael, Dr J. Halliday Croom; *Treasurer*, Dr William Craig; *Secretaries*, Dr D. Berry Hart, Dr A. H. Barbour; *Members of Council*, Dr Angus Macdonald, Dr Connel, Dr Bruce; *Librarian*, Dr C. E. Underhill.

The *President*, in the name of the Society, expressed sympathy with Dr Angus Macdonald in his being temporarily laid aside. He was glad to hear that there was a prospect of his appearing in the Society before the winter session closed. The good work done by him during his Presidency, the valuable material which he had contributed, the part taken by him in the debates, added to the responsibilities of those who had to succeed him. He had further to express his gratitude for the honour now conferred on him by the Society. He was not the less grateful because he had already, as President, experienced the kindness of the Fellows, which removed all misgivings and gave him therefore unalloyed delight. He was glad to have associated with himself two such able and active Vice-Presidents as Dr Carmichael and Dr Halliday Croom. The prospects of the Society, from its financial up to its highest interests, were never more prosperous, and he looked forward to a winter of good work.

The minutes of last meeting were read and approved of.

I. *Dr Milne Chapman* showed a PIECE OF WOODEN LEAD PENCIL, 2¾ inches long, partially encrusted with phosphates, which Mr Bell had lately removed from a woman's bladder. It was lying fixed against the bladder wall, and evidently offered occasional obstruction to the flow of urine from the left ureter. Its shape could not be accurately determined owing to its position and fixation. Mr Bell was asked to advise as to what operative measure would be best. He tried to measure the mass by means of a lithotrite, but was unable to grasp it. He then introduced his finger per urethram into the bladder to aid diagnosis, and the nature of the case was at once evident. Removal was easy by means of a polypus forceps, and was at once undertaken. The bladder wall round the site of the pencil was encrusted with stony matter, which was scraped off, and subsequent daily washings out were employed. There was no incontinence of urine whatever following the operation. The patient has been three years married, and states that the pencil has been in the bladder twelve weeks. It slipped in accidentally while she was attempting to clear away something which she says was obstructing the water passage. The external genitals, however, present all the appearances usually accepted as characteristic of masturbation.

II. A paper was communicated through Dr J. Matthews Duncan, ON THE DEVELOPMENT OF MALIGNANT FROM NON-MALIGNANT TUMOURS OF THE UTERUS (from the Laboratory of Professor Slavjansky, Gynecological Clinic, St Petersburg), by William Maslovsky, M.D., which appeared at page 588 of this Journal.

The President congratulated the Society on having received from Dr Maslovsky such an able and interesting communication. He would have liked to have had an opportunity of studying the paper, but on hearing it read he did not think that the first case was a true development of a malignant from a non-malignant tumour. The polypus had been removed twelve years previously, and the same patient might subsequently become the subject of a carcinomatous development. He had seen the case referred to in Sir J. Y. Simpson's lectures, in which there was a polypus in the upper part of a uterus, in the lower part of which there was commencing malignant degeneration from which the patient died. The malignant degeneration in Dr Maslovsky's first case seemed to be sarcomatous; there were oat-shaped bodies present in the substance of the tumour, resembling those of a spindle-celled sarcoma; the glandular proliferation might have been superadded.

Dr Gordon remarked that the practical deduction was to get rid of all tumours as early as possible. The recurrent fibroid in the breast was an example of a simple tumour becoming malignant.

Dr Carmichael thought the paper very suggestive. A hard and fast line could not be drawn between malignant and non-malignant tumours. Cancerous tumours were of an epithelial type, and peculiar from their rapid progress and invasion of surrounding tissues. The subject required further investigation, but the paper was a valuable contribution to it. He suggested that the writer be made a corresponding member of the Society, if he were not one already.

Dr Buist said that all were agreed that non-malignant could develop into malignant tumours, but there was obscurity as to how this occurred. The division of tumours into benign and malignant was artificial; no tumours were beneficial, or could be spoken of as benign. The clinical distinction chiefly relied on in diagnosis was the following:—Innocent tumours were firm, contained little juice and few young cells, were sparingly vascular and circumscribed; the malignant were soft, contained much blood with juice and young cells, and infiltrated the tissues around. With the latter, cachexia was present. He desiderated clinical data in the report of the cases submitted. The first case seemed to be a degenerated fibroid; ulceration might be expected in such a case. The second case was like an adenomatous tumour which had degenerated; it had not a cancerous appearance.

Dr Craig showed that *a priori* we should expect the development of simple into malignant tumours; there was nothing less likely than that these should escape malignant degeneration. It was difficult to show how malignant growths could appear in normal tissue.

Dr Chapman said an epithelial cell was required for the development of malignant disease. In the cases reported the changes began on the surface and extended downwards.

Dr Hart referred to Cohnheim's theory that tumours arise from germinal tissue.

Dr John Robertson remarked on the peculiarity of the character of the cells in malignant tumours; they were larger, and arose from processes of proliferating cells as in the cases described.

At the close of the discussion the nomination of Dr Maslovsky as a corresponding member was proposed by Dr Carmichael, and seconded by Dr Craig.

III. A paper, by T. G. Nasmyth, M.B., was read, on A CASE OF INDUCTION OF PREMATURE LABOUR, PATIENT HAVING BEEN PREVIOUSLY DELIVERED BY CRANIOTOMY; communicated by Dr Hart., which appears at page 720 of this Journal.

Dr Buist was struck with the length of time which elapsed before labour began. His experience was that if you introduced the catheter over night, labour set in next morning. On one occasion he had introduced the catheter at 10 P.M., and by 8.30 A.M. delivery was completed. On another occasion the child was born before he arrived.

Dr Carmichael had not often induced labour in this way, as he always found it took a long time. In Dr Buist's cases labour might have begun before interference.

The President said there was no doubt that Dr Nasmyth did what was right in the interests of the child. It was better to introduce a solid bougie, of larger size than a catheter, as it was less likely to be a source of infection. This was the best method when there was little time. In other cases separation of the membrane was good practice. The remarks on the case were judicious; we should not be guided by the length of the conjugate diameter alone.

IV. *Dr Church* read a paper on a CASE OF ECLAMPSIA, which appeared at page 601 of this Journal.

Dr Carmichael had had a case of a great amount of dropsy, with scanty and highly albuminous urine. He had given the patient nothing but milk for the last four months, and the dropsy was reduced to a minimum. Dietetic treatment was all-important in these cases. It was exceptional to have evidence of nephritis; there was none in his case.

Dr Rattray had seen a good many similar cases—two of which caused him great anxiety. One was a strong, stout woman, who had fits for ten days previous to her confinement. About twenty-four hours before delivery, as the usual remedies had not succeeded, he bled her to the extent of twelve ounces. Dr Matthews Duncan came in at the time, and recommended a withdrawal of other six to eight ounces. He had heard of the death of this patient at a subsequent confinement. The second, a short, stout primipara, had bronchitis, with swollen legs and face. Convulsions came on. He found her in a critical condition, and, as chloral and bromide failed, he bled her freely, with the result that she regained consciousness, and in a few hours gave birth to a healthy child.

Dr Robertson referred to the danger of the occurrence of embolism. Hæmorrhagic retinitis occurred in other conditions as well as in albuminuria.

Dr Playfair thought that the convulsions might have produced the renal disease. The urine was not examined until after convulsions had occurred.

Dr Hart asked whether there was much post-partum hæmorrhage. He believed in the administration of croton-oil. It was an interesting question whether, as Halbertsma says, the pressure of the uterus on the ureters produces renal disease and eclampsia.

Dr Wilson had a case of acute nephritis in which pilocarpin answered admirably. He held that the kidneys were primarily at fault.

The President remarked that albuminuria occurred without convulsions as well as convulsions without albuminuria. There was no doubt that Dr Church was right in accounting for the convulsions by the previous tendency to renal affection. The case was interesting, because it was a second pregnancy, and also a case of twins. When convulsions occurred in a multipara with albuminous urine, he suspected twins, because the more rapid development and larger size of the uterus favoured albuminuria. In Dr Church's case the twins were large, and but recently dead. Milk diet, as insisted on by Tarnier, was of the highest importance.

Dr Hart had seen a case of still-born twins in a primipara in which the mother, after an easy delivery, became comatose, and died in a few hours.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Amyl Nitrite for Ague.—Dr Saunders of Indore, India, reports in the *Indian Medical Gazette* a number of cases of ague successfully treated with amyl nitrite. He asserts that in every instance the disease yielded quickly and permanently to the amyl treatment.

He mixes the drug with an equal volume of oil of coriander, to make it less volatile and to cover its odour, and administers it as follows:—Four drops of the mixture, or two of amyl, are poured on a small piece of lint, which is given into the hands of the patient for him to inhale freely. He soon becomes flushed, and both his pulse and respiration are much accelerated, and when he feels warm all over the inhalation is discontinued, as the symptoms continue to increase for some time afterwards. A profuse perspiration now sets in, which speedily ends the attack, though in some cases the cold stage merely passes off without any hot or sweating stage (*Scientific American*).—*Therapeutic Gazette*, Sept. 1881.

RHINACANTHIN, A NEW REMEDY FOR RINGWORM.—Dr Liborius, having observed in China that the tincture of an unknown fibrous root was used successfully as a remedy for ringworm, obtained some of the plant, which turned out to be the *Rhinacanthus communis*, the plant of which the leaves, bruised and mixed with lime-juice, are used in India as an application for the same complaint. According to the *Pharm. Zeit. f. Russland* and the *Pharmaceutical Journal*, Dr Liborius has since obtained from the root a quinine-like body, supposed to be the active constituent. It resembles chrysophanic acid in being antiseptic and anti-parasitic. He proposes to call it rhinacanthin, and represents it by the formula $C_{14}H_{18}O_4$. It occurs only in intercellular spaces within the bark, which contain an intensely red substance, supposed to be a compound of rhinacanthin with an alkali. It forms with bases beautiful red compounds easily decomposed by certain neutral solvents, such as petroleum spirit, which dissolve the rhinacanthin and assume a yellow colour (*Medical and Surgical Reporter*).—*Therapeutic Gazette*, Sept. 1881.

THE TREATMENT OF THE NIGHT-SWEATS OF PHTHISIS BY COTO.—Twelve months ago, while administering the fluid extract of coto to control diarrhœa in a case of phthisis, I found that it arrested the night-sweats with which the patient was troubled. Since that time I have given this drug in twenty-two cases of night-sweating, with decidedly beneficial results in all cases except two. In sixteen cases the arrest of the sweats was prompt and long-continued. In four cases the sweats, although controlled, soon returned. In two cases only was there no influence seen. One of the cases where coto completely failed to be of any benefit was one of rapid phthisis accompanied by great pharyngeal irritation. Atropine proved efficacious in this case, but it had to be continued for a lengthened period. Coto appears to possess the advantage over atropine of being more permanent in its effects. In the other case of failure, atropine, strychnine, and oxide of zinc also failed to be of any benefit, and of being able to allay gastric catarrh, which is generally present in these cases (Dr J. Stewart, in *Canada Lancet*).—*Therapeutic Gazette*, Sept. 1881.

ACTINOMERIS HELIANTHOIDES (GRAVEL WEED).—This is a plant of the helianthus family. It is found in middle and upper Georgia, North Carolina, and East Tennessee, and in many other places in the United States. My attention was called to it in an obscure old book called the *Cherokee Physician*, written by Dr James W. Mahoney, as dictated by a Cherokee doctor named Richard Foreman, both of East Tennessee. Dr James W. Mahoney refers to a pamphlet written by Dr Turk, and published in 1845, in which Dr Turk says, "I have never failed to cure gravel, of even long standing, with this root tinctured in alcohol." It grows on upland and bottoms, from five to eight feet high, has a bushy top and many yellow flowers; blooms about the last of July, the blossoms resembling the artichoke. The stalks are in appearance four-square, but, when examined, are found to have four welt-like edges, which make the stalk appear square. The root is the part used, which is of various sizes, from the size of a goose-quill to that of a child's finger, and, freshly dug, contains a thick oil. When dried it looks like resin, and has a strong aromatic, rather terebinthinate odour. It is this oleo-resin that contains its medicinal properties. I called attention to it a year ago, but do not see where any one has tried it much. I am using it all the time in irritable bladder, strangury, calculus affections, and kidney affections. I find it a very valuable diuretic, either in retention or suppression of the urine. Dr Turk gives the case of a gentleman in North Carolina who has been affected for fifteen years with retention of urine, and he had to draw his water with a catheter most of the time. Turk says he cured him with a tincture of this root. I was called in council to a child five days old that had discharged but little urine. The attending physician had tried tincture of apis, mel. dulc., spr. of nitre, parsley root (in tea), a tea of watermelon seed, pipsissawa, and several other diuretics, with the warm bath, but to no purpose. I at once prescribed the tincture of Actinomeris helianthoides and Polytricum juniperis, equal parts, which produced a free flow of urine in some three or four hours, and the child had no further trouble after that time. I have had several cases of irritable bladder from the passing of phosphatic sand, and I have relieved them with this article alternated with carb. of lithia. I have recently had several cases of dropsy in which ordinary diuretics did not act until I added the tincture of actinomeris. I give it in a gin tincture, in doses of one or two tablespoonfuls every two or three hours (officinal tincture). As a diuretic we have but few, if any, articles equal to this one; and as a curative remedy in calculous affections there is, in my opinion, no known remedy equal to it. It is doubtless aided by the preparations of lithia in the calculous diathesis. I thus call attention to this—one of our most direct remedies. Please try it and report (*Medical Eclectic*).—*Therapeutic Gazette*, September 1881.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

TREATMENT OF FAVUS BY A NEW METHOD OF DEPILATION.—Bulkley of New York, having to treat a large number of cases of ringworm in a public institution, and desiring to depilate more rapidly than can be done by the forceps, after several attempts has devised a method for the extraction of hairs which he has found of the greatest service in this and several other cases within the last two years. The method consists in using masses or sticks of a very adhesive material, which can be melted and made to adhere to the hair in large bodies, and which, when cold, are forcibly removed, drawing numbers of hairs at once with them. The idea sought for in the formation of these sticks was to obtain a material which, while it melted at a comparatively low temperature, would cool quickly and be perfectly hard at that of the body. It was also necessary to obtain one which would have great cohesive properties. The following formula answers the purpose perfectly:—

℞ Ceræ flavæ, ʒiij.
Laccæ in tabulis, ʒiv.
Resinæ, ʒvj.
Picis Burgundicæ ʒx.
Gummi dammar, ℥iss.

After the ingredients are thoroughly incorporated, the mass is rolled into sticks of various sizes from one-quarter to three-quarters of an inch in diameter, and cut off in lengths of two or three inches. The idea of the different sizes is that the work may be rapidly done with the broader sticks where a large surface is to be gone over; while the thinner ones fit small irregularities, or can be applied to isolated spots. In the employment of these sticks the hair should be cropped short—about one-eighth of an inch long over the part to be treated. The end of the stick is heated in an alcoholic flame and pressed quickly upon the hair with a slight rotary or twisting motion, until it rests upon the scalp. It is to be left on until quite cold, and is then removed by bending it over and drawing the hairs in succession even with a slight twisting motion. When the stick is removed from a greatly diseased patch of favus which has still much hair, the end is as thickly set with the bristling hairs as can be imagined, resembling a very fine brush. The best method of preparing the stick for a second application is to burn the hairs in the flame of the lamp, and wipe the end of the stick firmly on a sheet of paper. This both destroys the parasite in the hairs extracted, and leaves a smooth surface ready for subsequent use. In regard to the parasiticide employed, Bulkley is greatly in favour of using the bichloride of mercury of the strength of about four grains to the ounce as an application to be made by the physician immediately after the extraction of the hairs. The watery application readily penetrates into the open follicles, and if it is well rubbed into the scalp it accomplishes all that can be desired. Danger would, however, attend the indiscriminate and free use of this by the patient. Citrine ointment diluted three or four times, applied at home, acts as an auxiliary in destroying the fungus.—*Archives of Dermatology*, April 1881.

PHTHEIRIASIS PALPEBRARUM.—Stelwagon, in recording an instance of this rare form of pediculosis, notes as an important diagnostic feature the presence of the excrement of the pediculus—reddish specks—on and beneath the lower lids, resembling specks of iron rust.—*Archives of Dermatology*, July 1881.

RAPID CURE OF LICHEN RUBER BY HYPODERMIC INJECTIONS OF ARSENIC.—Köbner reports the cure of what seems to be a well-marked case of lichen ruber by means of hypodermic injections of Fowler's solution. The eruption was more or less general. That the rapidity of cure was due to the hypodermic method is proved by the facts that the case had already been ordinarily treated, but without benefit; and also once during treatment the patient rebelled against the plan, and the solution was then given by the mouth, but improvement failed to continue. The injections then were renewed, and a rapid recovery followed. The intense itching present yielded to the first few injections. The injections were made at intervals of one or two days, and in all but one fluid drachm of the solution, each injection averaging about four minims of the solution with two parts of water. Six months afterwards there had been no reappearance of the eruption.—*Berliner Klinische Wochenschrift*, xvii., 1880.

PIGEON-LICE INFESTING THE SKIN OF A WOMAN.—Dr Goldsmith of Rutland, Vermont, relates the case of a woman who came to him in spring, complaining of intense itching all over her body, caused, she said, by insects crawling over her. She had a yellowish skin and cachectic appearance. No insects could be found on careful examination, yet she maintained that she had often seen them crawling out of her skin and crawling in again. She was desired to go home, and come again with specimens. She returned in a few days, bringing some small insects, with which Goldsmith was not familiar, in a phial. She said that as soon as she began to sweat from any cause, these would appear. Some wraps being put on her, hot tea administered, and having been placed near the fire, she soon began to sweat. As soon as the skin began to moisten, small blackish or brownish insects emerged, singly, in pairs, or in triplets, from numerous points. After the sweating ceased, the insects, as the woman had asserted, crawled into her skin again. *The points where they entered and emerged were the sweat-pores*, which made cosy nests for them at ordinary seasons, but were apparently not to their taste when deluged with sweat. On being submitted to Dr le Conte of Philadelphia, he pronounced them to be pigeon or hen-lice. When the woman came again, she stated that though she had no chickens about her house, some pigeons nested in the garret, and she sometimes handled them and cleaned their roosting-places. She was directed to get rid of the pigeons, and wash the nesting-places with tar-water and a solution of corrosive sublimate (20 grs. to the bucketful). As to those on her person, she was advised to take sweats occasionally, and, when the lice began to scamper about, to rub over her person sulphur-powder made into a sort of cream with tar water, and to boil her clothes. She has not had any further trouble with the lice. This mite or tick is the *Dermanyssus avium.* It infests domestic poultry, canaries, and other cage birds. It may harbour in the cages or aviaries of singing birds, even though the most scrupulous cleanliness is exercised, especially if the perches used for the birds are made of hollow canes, and not solid wood. In these hollow canes they live especially, and there they may be found at all seasons. Their colour is due to the blood which they have sucked, since when fasting they are colourless. They are extremely active, and are about the size of the egg of the common head-louse. [Further facts with regard to these creatures will be found at page 88 of the catalogue of the Sydenham Society's *Atlas of Portraits of Diseases of the Skin*, and a plate exhibiting the animal at various stages of its development. An explanation may here be found of some of the alleged cases of emergence of lice from the skin.—W. A. J.]—*New York Medical Record*, 29th October 1881.

MECHANICAL RESTRAINT IN THE TREATMENT OF INFANTILE ECZEMA. —Dr James White points out that much of the good done by external applications in infantile eczema is undone by the scratching and rubbing indulged in by the little patient to relieve itching. To obviate this he recommends mechanical restraint. In eczema of the head, a skull-cap is made of fine old cotton or linen cloth, to fit closely to the calvarium; and, for the face, a mask shaped for it, with exactly placed apertures for the nose, eyes, and mouth, and slits for the ears, is fashioned. It is to be gathered in somewhat beneath the chin, and made long enough to lap some two inches at the back of the head. The nose and ears should protrude through their appropriate openings, to assist in retaining the mask in position, which should be tightly stitched or pinned with fine safety-pins at the back of the head. By these means ointments may be kept closely in contact with the skin of the parts, and renewed once in twenty-four hours. In mild cases this may be sufficient, but, in more severe, additional means must be employed against mischief, as the hands of a strong infant are capable of doing injury both to the mask and the skin beneath during the paroxysms of itching; or of developing the disease upon the neck and other parts. It is generally best to use a strait jacket in addition to the mask, in all but the mildest cases of the disease, even when the head alone is affected. A hole is to be cut in the closed end of a small pillow-case, large enough to allow the child's head to pass through. This is to be drawn down over the body and arms. The back and front surfaces are then to be stitched together between the arms and body by a long darning-needle, from the axillæ down to the ends of the fingers, thus confining the arms in closed sleeves to the sides, or safety-pins may be used instead of the stitches, so that the jacket may be more readily taken off when necessary. The pillow-case is then to be fastened together by the pins between the legs from front to back, so that the arms cannot possibly be brought up to the head. This lower fastening can be removed without trouble to change the napkins. The hands are now harmless, and though the little patient resists the mask and jacket at first, in a day or two they are worn, when adjusted, without a struggle. Improvement is seen in 24 or 48 hours. The skin, kept at rest, loses rapidly its inflamed condition, and the nerves, irritated by friction, now quiet down. Not until the skin is completely restored to its normal condition, or at least until all signs of inflammation and of pruritus have disappeared, are these mechanical means of restraint to be relaxed. When the arms and legs are involved, the same plan of pinning is adopted, only the pins are carried along the inner side of the legs from the crutch to the feet, the legs being kept some distance apart. If the outer edge of such trousers be then fastened to the bed or cushion on which the child is seated, the legs can neither be drawn up nor approximated to any dangerous contiguity.—*Boston Medical and Surgical Journal*, Oct. 20, 1881.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. Milne Chapman, M.B., M.R.C.S.

The Curability of Uterine Displacements, by Paul Mundé (*Amer. Journ. of Obstet.*, No. 4, 1881).—Recent displacements of any variety are the only cases which offer a fair chance of complete recovery by any of the mechanical means at our disposal. Of these means pessaries are the most convenient for temporary relief, but only in a comparatively small number of cases does permanent cure result. The best curative means of support of the displaced uterus is probably the systematic and intelligent use of vaginal tampons impregnated with a mild astringent solution. Posture, while excellent as a means of relaxing the uterine supports and relieving pelvic congestion, is by its inconvenience at best but a means of temporary relief. Permanent relief, *cure*, can be expected, and will be obtained, only when the displacement is of recent origin, especially when it has been produced by some sudden physical shock;

or when the complete tissue-metamorphosis accompanying puerperal involution aids in restoring to the uterine supports and the uterus itself their original and healthy tone. The most favourable period, therefore, for the treatment of a uterine displacement or distortion, with the view to a permanent cure, is within one or two weeks after delivery, before the woman has left her bed. The excitation of a certain amount of plastic exudation in the walls of a flexed uterus may, if kept within bounds, result in permanent straightening of the organ. This may be accomplished by rapid dilatation or by the protracted wearing of stem pessaries, but permanent success will at best be rare. While permanent cure is only occasionally met with, so much relief is afforded by pessaries that they should in no case be discarded unless all treatment be counter-indicated. Electricity, if rationally and scientifically applied for a sufficiently long period, offers chances of cure in comparatively recent cases which call for a more thorough and persistent trial of this method. The *cure* of a flexion by operative (bloody) treatment is impossible; the canal may be made comparatively straight by a division of one or the other or both lips of the cervix, but the flexed shape of the organ still remains.

Further Notes on the Treatment of Nerve Prostration and Hysteria connected with Uterine Disease, by W. S. Playfair, M.D., London (*Lancet*, 10th and 17th Dec. 1881).—Dr Playfair's former paper on the above subject appeared in the *Lancet* during May and June last, and in these notes he states his entire approval of what he then wrote, and gives some fresh and startling cases. One of them was an utter wreck of a woman, full of aches and pains, who had spent twenty years in bed as a confirmed invalid, and whose weight was 4 stones 7 pounds. After eight weeks' treatment she had nearly doubled her weight and was walking about, and in three months she went with her nurse to Natal to perfect her recovery. The second case had been ill apparently for fifteen years or so, and was so susceptible to jars that she had to be brought to London, a distance of 200 odd miles, under the influence of an anæsthetic. Her condition was even worse than that of case 1, but in five weeks she was out walking and driving, and in less than three months she started with her husband on a tour round the world. The treatment consists in seclusion, rest, over-feeding, massage, and galvanism; but for the details we would refer to the papers quoted, or, better, to Dr Weir Mitchell's book. The treatment is known as the Weir Mitchell treatment, and the condition for which it is applicable has been called by Goodell "nerve tire and womb ills."

The Operative Treatment of Prolapse of the Vagina and Uterus, by A. F. House, M.D. (*Amer. Journ. Med. Scien.*, 1881, No. 3).—The paper is mostly taken up by critical descriptions of the three different operative procedures for the above which have in late years come before and been indorsed by the profession—Simon's, Hegar and Kaltenbach's, and Bischoff's. The author's conclusions are:—" In Bischoff's operation the greatest change is effected in the vaginal axis, and the vagina is decidedly narrowed; therefore we may reasonably expect from it the most happy results. It is, however, a somewhat complicated operation, and should only be attempted by one who is specially skilled in plastic operations, and particularly those of the female genital organs. Where large cicatricial contractions of the perineum and vagina exist, it may be impossible to form a tongue-shaped flap, while in extreme relaxation of the posterior wall it becomes necessary to substitute this operation by one of the two others. Simon, whose operation is much simpler, has cured the majority of his cases. Hegar and Kaltenbach have met with excellent results; and this operation narrows the vagina, changes its axis, and creates a strong and thick recto-vaginal septum."

LEON LE FORT'S OPERATION FOR PROLAPSE; Three Cases: by Fanny Berlin, M.D. (*Amer. Journ. of Obstet.*, No. 4, 1881).—This method consists in drawing the uterus completely down, and rawing two portions of vaginal wall, an anterior and a posterior, close up to the cervix, then bringing them together so as to divide the vagina into two and to form a bridge upon which the uterus will rest. Along with this perineorraphy was combined.

ON ARTIFICIAL RESPIRATION IN STILL-BORN CHILDREN: THE AMOUNT OF VENTILATION SECURED BY DIFFERENT METHODS; an Experimental Inquiry, by F. K. Champneys, M.B. (*Medico-Chirurgical Transactions*, vol. lxiv. p. 40).—The writer points out that almost any form of irritation may be sufficient to excite inspiratory efforts in a case of the first (livid) stage of asphyxia, whereas, in the second (pale) stage, not only can reflex action not be relied on, but all forms of irritation are simply useless and waste time. Consequently it is for this second class of cases that artificial respiration is necessary, and only in such cases that the value of the various methods can be tested. The author, by a very ingenious arrangement of apparatus, was able to measure the amount of respired air in his experiments on twenty infants' bodies. The various methods tested were those of Marshall Hall, Howard, Sylvester, Pacini, Bain, Shücking, Schüller, Schrœder, and Schultze, and from three to six of these were tried upon each cadaver. A description of each of the methods is then given, that of Schultze being as follows:—The navel-string being tied, the child is seized with both hands by the shoulders in such a way that both thumbs lie on the anterior wall of the thorax, both index fingers extend from behind the shoulders into the axillæ, and the other three fingers of both hands lie obliquely along the posterior wall of the thorax. The head is prevented from falling by the ulnar sides of the two hands. The operator stands with somewhat separated legs, and bends slightly forwards, holding the child, as just described, at arm's length, hanging perpendicularly. Without pausing, he swings it upwards from its hanging position, still keeping his arms straight. When the operator's arms have gone slightly beyond the longitudinal, they hold the child so delicately that it is not hurled over, but sinks slowly forwards and forcibly compresses the abdomen by the weight of the pelvic end. At this moment the whole weight of the child rests on the operator's thumbs lying on the thorax. At no point in the procedure should any compression be exerted by the hands on the thorax. After the child has slowly but completely sunk over, the operator again lowers his arms between his separated legs. In this movement several factors combine to produce quite passively a deep inspiration. After detailing the experiments, the writer in his remarks says, "On looking at the table of results it will be seen that the earliest experiments eliminated three methods as practically useless, viz., those of Schrœder, Howard, and Marshall Hall." Schüller's method was found impracticable. Sylvester's method and its modification by Pacini and Bain introduce more air into the lungs than any other method. In using Sylvester's method the arms should be held above the elbows and everted. In using Pacini's or Bain's the legs should be fixed. The second half of Pacini's and Bain's second method should not be employed, as the weight of a new-born child's body is sufficient counterpoise to the necessary traction. In using these two latter methods the operator may face the subject and lift the shoulders from below. By this means he is able to watch the child's countenance, and is able to introduce an equal quantity of air. Shücking's method is no improvement on Sylvester's. Schultze's plan, although its power of ventilation is less than that of Sylvester and its modifications, yet acts efficiently. In Schultze's method the diaphragm does descend, though but slightly; its principal action, however, is on the thoracic walls, as in the Sylvester group. In Schultze's method it is important that the whole weight should rest (at the end of the inspiratory movement) on the index fingers in the axillæ, and should not be distributed on the other fingers. The violence of action of this method is not in its favour. Opisthotonos always produces expiration by tension of the anterior body walls, and should be avoided.

In a second paper on the same subject Dr Champneys considers the expansibility of various parts of the lungs, also experimentally. After showing which portions of lung are most usually found expanded or unexpanded, he says, "The spots of predilection for expansion or atelectasis underlie the regions of greatest and least movement of the chest walls."

CASES.

Dermoid Ovarian Tumour in a Child aged Seven; Ovariotomy; Recovery. By J. Knowsley Thornton.—*Brit. Med. Jour.*, Dec. 10, 1881.

A Case of Removal of the Uterine Appendages for the Arrest of Hæmorrhage due to a Myoma (successful). By Lawson Tait.—*Med. Times and Gaz.*, Dec. 3, 1881.

A Case of Locked Twins: Delivery without Decapitation or Perforation. By J. Barton, M.B.—*Lancet*, Jan. 7, 1882.

Septicæmia and Death following the Repeated Introduction of Sponge and Tupelo Tents. Lusk.—*Am. Journ. of Obstet.*, No. 3, 1881.

Pelvic Cellulitis and Death following Dilatation by a Tupelo Tent and Stem Pessary. Janvrin.—*Ibid.*

Hæmatometra following Typhus. A. Martin.—*Centbl. f. Gyn.*, Dec. 24, 1881.

Four Cases of Sarcoma Uteri. Dr Jacubasch.—*Zeitsch. f. Geb. u. Gyn.*, Bd. vii. Hft. 1.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

The Operative Treatment of Floating Kidney by Fixation.—That extirpation of one kidney, and thus of one-half of the entire urine-secreting surface, can be borne by the human organism without instant danger to life, was proved by Simon in his work on the *Surgery of the Kidneys*, published in 1871. It is obvious that various renal diseases will be more dangerous in persons with only one kidney than in those with two, even if a vicarious activity has been set up and a compensatory hypertrophy established. In this opinion Moseler, Oppolzer, and Rayer concur. Of fourteen fatal unirenular cases tabulated by Rayer and Moseler, nine suffered from renal calculus, and seven of them died suddenly from obstruction of the ureter and rapid anuria. Extirpation of a kidney, then, as Simon expressly laid down, is only permissible when the patient's life is seriously threatened by, and all other less dangerous measures have failed in getting rid of, the disease. Floating kidneys have of late years been repeatedly extirpated. Recently, however, I have devised a method of fixing the organ by means of sutures, which, both with regard to the operation itself and the future life of the patient, seems less dangerous than extirpation. I have operated in this manner in two cases where all other means had failed. The patients had been confined to bed for weeks and months by severe and constant pain. In neither case could extirpation be thought of. As to the first, there was reason to believe that a calculus existed in one kidney, possibly in the non-movable one; and in the second case both organs were movable. Accordingly I resolved to relieve the patients by what I may term the "operative fixation of floating kidney." In both cases the right kidney was extraordinarily movable, the viscus falling across the middle line to the left whenever the patient lay on that side, and sinking deeply into the right hypochondriac region when she stood upright. The patient having been anæsthetized, a vertical incision was made along the edge of the sacro-lumbalis muscle from the twelfth rib to the crest of the ilium. The quadratus lumborum and external fibrous layer of peritoneum were then cut through, and the kidney with its adipose capsule was drawn backwards into the wound and then secured with from six to eight catgut sutures. (According to Arnold, the kidney is not a completely extra-peritoneal organ, but lies between two layers of that membrane, the posterior portion of which may thus be divided without the general peritoneal cavity being opened up.) The whole wound was then stuffed with carbolic gauze. The cases progressed favourably; the dressings were changed at intervals of five days; and at the end of four weeks the wounds were almost entirely closed, and the kidneys remained firmly attached to the points of suture. The following are short clinical histories of the two cases:—

I. Mrs S., 38, unipara. Ren. mob. dexter produced suddenly three years ago through lifting heavy weight. Suspicion of left-sided renal calculus. Excruciating general pains, sometimes causing loss of consciousness. Operation, as above, performed 14th April 1881, after which date all pain disappeared, and up to the present (10 weeks since the operation) there has been no recurrence.

II. Miss W., 28, nullipara. Has suffered for two years. Both kidneys movable, the right more so than the left. Symptoms the same as in Case I. The right kidney was fixed with sutures on 10th April 1881.

As in one case three months almost have now passed without return of pain, we may regard the patient as cured. In Case II. some discomfort remains, and we shall operate on the left kidney in the hope of obtaining the wished for result. Though the kidneys were firmly fixed at the end of four weeks, they have now, owing to the patient's standing and walking, again become somewhat movable. This motion is upwards and downwards; the inward tendency has disappeared. The adhesions do not seem to have been strong enough to permanently resist the constant weight of the kidney; and it may therefore be advisable, in order to obtain a more secure attachment, to incise the capsula adiposa on the convex margin, and, having separated it from the posterior surface (as does Simon in extirpation of the kidney), to firmly stitch the detached part into the wound. It would be well, also, to fix the kidney at the lowest point in its area of mobility, so as to secure for it a firm basis of support, and to avoid straining the adhesions when the patient stands upright. Experience shows that kidneys fixed in abnormal positions never give trouble, even when very low down. The operation, under antiseptic rules, is devoid of danger, and, as Case I. proves, is capable of removing all the painful symptoms without increasing the danger to life in subsequent injuries or diseases of the kidney. Further, I am convinced that the kidney may be more safely removed by the posterior than by the anterior operation, for during the latter the peritoneum must be cut through several times, a danger altogether avoided in the posterior operation. In this, also, the pedicle is less stretched during deligation, and so less risk of rupture and hæmorrhage is incurred. Finally, I would only consider extirpation of a floating kidney indicated when the viscus itself shows signs of disease, or when, contrary to all expectation, nephrorhaphy had failed to effect a cure.—E. Hahn, in *Centralblatt für Chirurgie.*

On a Peculiar and as yet Imperfectly Described Form of Gonorrhœal Arthritis.—Two varieties of gonorrhœal arthritis are usually described. In the first of these, the serous, the knee is most often affected, but the ligaments and other tissues round the joint escape. In the second form pain, swelling, and redness are all more marked. The connexion of the latter variety with gonorrhœa has been doubted, and some authors have regarded it as the rarer form of the two. Duplay and Brun have arrived at a contrary opinion. They state that the second variety occurs with equal frequency in both sexes, that there is no relation between the severity of the urethritis and that of the articular lesion, and that the wrist and elbow are the joints most often attacked. The knee, so often the seat of hydrops, is relatively but seldom affected by this severe form of arthritis. In general there is an incubative stage lasting some days, accompanied by painful tension in joints and muscles, which outwardly exhibit no change; and general depression. Then some particular joint becomes extremely painful and swollen. Pain, aggravated at night and rendered excruciating by pressure, is the first symptom. There is no intra-articular effusion, but extensive infiltration into the surrounding tissues is evidenced by tense and often widespread œdema of the cutaneous coverings. This condition may be mistaken for abscess, and incisions have been made, of course without evacuating pus. The pain on pressure over the line of the articulation, and, later on, crepitation during movement, help to distinguish this disease from phlegmon. The failure of salicylic acid in some cases excludes another source of error. The treatment consists solely in complete fixation of the joint by means of plaster of Paris bandages, the application of which is speedily followed by diminution of swelling and cessation of pain. After from four to six weeks the dressing may be removed and passive movements commenced. If, however, the plaster bandages be not applied till after the disease has existed some time, the joint, after their removal, will be found considerably stiffer, or even completely, anchylosed. In some cases all treatment fails, and notwithstanding all that can be done, anchylosis results (Duplay and Brun, *Archiv Général de Med.*).—Riedel, in *Centralblatt für Chirurgie.*

A Case of Scleroderma and Onychogryphosis.—This disease developed itself in the case of an elderly man who had sustained a compound fracture of the bones of the left forearm in a boring machine. Severe attacks of secondary hæmorrhage rendered it necessary to ligature, at different times, both the brachial and axillary arteries. Only after nine months, when several sequestra had come away, was a complete cure effected. This was in 1870. Four years ago the finger-nails of the left hand began to grow thicker and bend on themselves like claws. They appeared opened out, cracked, transversely expanded, and curled like a ram's horn. The skin adjacent to the nails was as though wasted and at the same time friable, dry, and paper-like, without either hairs or wrinkles. The surface presented a dull, shiny appearance, and its temperature was lower than that of the other hand. The fingers, which were bent at the phalangeal and carpo-phalangeal joints, were only movable to a limited extent. Sensibility remained perfect, and muscular excitability, as tested by the induced current, had not completely disappeared. Wölfler is inclined to Rehn's opinion,—viz., that we have here to do with a chronic inflammatory process,—but he leaves open the question as to whether the condition is due to some lesion of the blood circulation or to changes in the nervous apparatus (A. Wölfler, *Zeitsch. für Heilkund*).—H. Braun, in *Centralblatt für Chirurgie.*

TWO CASES OF "PURE OZŒNA."—Krause has had an opportunity of performing the autopsy in two cases which during life had been diagnosed as pure ozœna, *i.e.*, ozœna uncomplicated with mucous ulcerations or carious changes in bone. Like E. Frænkel, he was able to demonstrate all the stages of a process " which exhibits the tendency of all the constituents of the mucous membrane to become converted into fibrous tissue which subsequently shrinks." The endarteritis obliterans found by Frænkel was not present in these cases, but the tunica adventitia was obviously thickened, whilst the lumen of the vessels was diminished. Some of the glands exhibited considerable infiltration ; others were granular, with fatty degeneration, and others had disappeared altogether. The most noteworthy point, according to Krause, was the actual demonstration of the infiltrated cells undergoing degeneration into a bulky fatty detritus, and the formation of numerous large balls of adipose matter. Krause considers this process the analogue of xerosis of the conjunctiva and callous stricture of the urethra. It is not easy to determine whether, as in these last-mentioned diseases, shrinking and atrophy of the nasal mucous membrane are preceded by a gonorrhœal process, for ozœna rarely comes under observation in its early stages. On the other hand, Krause believes that the disgusting fœtor originates in the altered mucous membrane in which the degenerated cells are for the most part found. These cells reach the surface accompanied by masses of fat and pigment, displace the epithelium, and, still remaining adherent to the membrane, their fat is converted into fatty acids. In this case the object of treatment will be to bring about by energetic cauterization the transformation of the upper layers of the mucous membrane into fibrous cicatricial tissue.

TRAUMATIC PARALYSIS OF THE PNEUMOGASTRIC IN THE HUMAN

SUBJECT.—The notes of a case of extirpation by Von Langenbeck of a cancerous thyroid have been published by F. Deibel. The patient was a woman aged 48. During the operation a portion of the right internal jugular vein was excised and the vagus divided without the pulse becoming at all affected; only the respiration became deep and irregular, and there was increased cyanosis. In the further course of the operation the common carotid was ligatured at its point of exit from the tumour; but so close was this to the junction with the innominate, that Von Langenbeck, to add to the security of the ligature, tied the latter artery also a little below the bifurcation. The vagus was now divided a second time, and, finally, a ligature was placed on the subclavian close to its origin. Whilst this was being done the pleural sac was accidentally opened, an occurrence instantly followed by intense dyspnœa and cyanosis, the patient being still fully anæsthetized. The trachea was at once opened, a long canula introduced, and the breathing again became regular. The operation was not completed, and, pulmonary œdema setting in, the patient died eight hours afterwards. Deibel subjoins to this case a list of thirteen others in which the vagus was wounded, and then describes the effects observed subsequent to the sudden break in the continuity of the nerve. These are frequently not at all obvious, for the nerve has been already partially or completely destroyed by the tumour during the removal of which the injury to the nerve in question took place, whilst the vagus of the other side is acting vicariously by means of anastomosing branches. That such a sufficient transference of function may rapidly occur is proved by a case of Labat's, where the normal vagus of one side was divided, and the patient made a complete and rapid recovery. Deibel also shares Frey's opinion that the immediate effects of unilateral paralysis of the vagus are harmless so far as the lungs are concerned. From observations on the human subject Deibel can derive no confirmation of the theory based on experiments on animals, that in the human subject one vagus (the right) is in special relation with cardiac, and the other with pulmonary, activity. He also finds as little evidence in favour of the idea that fatty degeneration of the heart is a direct result of division of one of the vagi (F. Deibel, Berlin).—Richter, in *Centralblatt für Chirurgie.*

PHOSPHORUS NECROSIS OF THE FACIAL BONES.—Bruhns of Moscow publishes reports of six additional cases of phosphorus necrosis of the facial bones, in which the upper jaw was resected four times and the lower twice (once completely). All recovered. The resected bones were all found to be extensively sclerosed, just as Wegner has demonstrated in animals to which he had experimentally administered phosphorus. Bruhns accordingly regards this chronic sclerosis as the primary cause of phosphorus necrosis, and the periosteitis produced by solution of phosphorus vapour in the saliva as only accessory.

Part Fifth.

MEDICAL NEWS.

GLASS AS A COVER FOR DISSECTING-TABLES. —Having had occasion to re-cover one of the dissecting-tables at Surgeons' Hall, I substituted thick glass for zinc, and have found it answer so well that I have thought it worthy of being brought before the notice of others. The glass used is about half an inch thick, polished on one side, and ribbed or grooved longitudinally. The table is spread with soft putty, and the glass—cut to the exact size—is pressed evenly down upon it with the polished side uppermost, one end of the table being slightly raised. The margins of the glass are secured with a border of lead (or wood), which goes all round except at the lower end, where a wooden gutter is fixed to carry off fluids which drain down along the grooves. The surface of the glass can be kept beautifully clean by simple wiping. With glass of half-inch thickness firmly imbedded in putty, any ordinary wear and tear need not be feared, although it would be unwise to test its strength by direct hammering. The price with lead margin runs about 28s. per cover, *i.e.*, 12s. for glass, 4s. 6d. for putty, 5s. 6d. for lead, and 6s. for workman's time and wooden gutter. If the margin—which has been found practically unnecessary—were omitted, the cost would be considerably lessened, both for time and material. The consistence of the putty requires special attention. It should be so soft that it can readily adapt itself to the table and glass, and for this purpose requires a much larger proportion of oil than is necessary for ordinary glazing purposes.—CHARLES W. CATHCART.

DR LEWIS D. MASON, Physician to the Inebriates' Home, Fort-Hamilton, Long Island, has published a statistical account of 252 cases of inebriety that were under his care from 1st November 1879, to 10th September 1880. His tables are most interesting and instructive. We give a few extracts, 208 were males, 44 females; only 24 were illiterate, 92 had a rudimentary education, and 136, or more than a half, were well educated; of the females, almost all were married or widows.

Touching the question of heredity, we find that 107 or nearly a half were known to have had drunken parents or grandparents; 15 had insanity in their connexions. As to the age at which the habit was formed (not begun), in 146, or considerably more than a half, it was between the ages of 15 and 25. More than four-fifths of the whole (229) were inebriates before they were 35 years of age. As to predisposing causes, Dr Mason places insanity or inebriety of parents first, then as exciting causes, head injuries, social habits, army life, trade (in liquor), family troubles, business losses, etc. Among the practical deductions are the following:—

"The majority of inebriates do not apply for treatment until the habit has lasted, in the average, over ten years." "In no other disease is treatment begun so late and at such a disadvantage." "The predisposition of certain individuals to inebriety should be uppermost in the mind of every practitioner."

Unfortunately there are no *results* given, but that can hardly be wondered at since the period mentioned is less than one year.

In the *Philadelphia Medical Times* for July 30, 1881, Dr James H. Hutchison, writing on the treatment of alcoholism, gives a table of cases treated during twenty-three years for delirium tremens in the Pennsylvania Hospital. During the first thirteen years "it was usual to treat the disease with large quantities of stimulants and with more or less opium." The mortality was 8 per cent., and the duration of treatment averaged seven and a half days. During the last ten years the treatment consists mainly of beef-tea, etc., with bromide of potassium, and stimulants very seldom. The average mortality during this period has been 2·4 per cent., and the average duration of treatment five and a half days.

A NEW SOURCE OF QUININE.—A NEW THEORY ON MALARIA AND RHEUMATISM: A NOVEL USE FOR MOSQUITOES AND BEDBUGS. —A recent writer, under the name of "Medicus," in the Dallas *Herald* of September 6th, says:—In my last paper I asserted that mosquitoes contained a large quantity of animal quinia, and therefore, when they bit a person, they injected into his system an antidote to malaria and febrile causes generally. I had then experimented with the mosquito and knew whereof I spoke, and since you kindly published my communication I have captured quite a number of these insects, and, macerating them in a mortar with alcohol, have by chemical experiment actually precipitated the sulphate of quinia, or quinine of the drug stores, to the amount of seventy per cent. of the mass. In this southern land of ours, except where the salt breezes immediately along the coast are freshest from briny wave, in every household, in the woods away from the habitations, are myriads of chinches or bedbugs. Chinches, annoying as they may be, have a purpose, and night after night they are working the accomplishment of that purpose, achieving those duties which as factors in the economy of nature are incumbent upon them. The chinch in sucking blood from the human body draws nourishment and strength, and, above all, the material which in the retorts of his body is distilled into a rich fluid which he in biting one ejects into the body, to take the place of the blood he has but borrowed, and this entering into the circulation furnishes an antidote against rheumatism. All mercurial preparations, when taken in excess, cause articular rheumatism, affecting the bodies and the joints of the bones of the human body.

The calomel taken, by decomposition in the system, forms corrosive sublimate, but not in quantity to produce death save by the slow torture of rheumatism. Corrosive sublimate, as every housewife in all this land will testify, is the only riddance for bedbugs. The juices of the bug and the sublimate are the antidotes of each other, foes by nature, and wherever they meet only the death of the one or the other can end the contest. A single bug, of course, cannot overcome the quantity of sublimate he comes in contact with, but, the human system becoming gradually fully impregnated with this juice of the bug by their bitings at night, the poison in his veins of the sublimate from his use of calomel of mercury is in the end overcome and neutralized, and the cause being removed the rheumatism gets well.—*New England Medical Monthly*, Oct. 1881.

AT THE FUNERAL OF THE DEAD DOCTOR—WHAT IS SOMETIMES HEARD FROM THOSE ATTENDING.—"So G—— is gone! Too bad, isn't it?" "Yes; what was the cause of death?" "Meningitis from overwork." "Specimen obtained?" "Yes; will be presented at Pathological Society. Come and discuss it." "Well, G—— was a good fellow, but did not seem to succeed very well. Did he leave anything?" "Not much; understand his library will be sold for benefit of widow and children." "Indeed!" "Some volumes quite valuable." "When is auction to be? (thinking of a set to be completed). Who is to have his place at the hospital?" "Oh, that was arranged when he was sick." "F—— will surely apply." "Too late; place belongs to our college." "Who attended him?" "No one in particular; his medical friends dropped in occasionally." "Was he conscious at any time?" "Yes; promised his skull to me." "Got it?" "No! Widow objected." "Who writes his obituary?" "The man who has his place." "Speaking of meningitis, I had a patient——" (commences to recite case in detail; while so doing, listener, interrupting, suggests that the funeral has commenced).—*New York Medical Record*, December 31, 1881.

GERMS, busy germs, I know not what they mean,
Germs ever floating to prevent repair,
Resting on wound, however small its size,
Whate'er may be its tendency to heal,
And keeping ope the irritable sore.

Deftly we hold the thin carbolic veil
That hides our patient from the septic world,
Guards from the *rose* which reddens over him
Who, unprotected from the awful scourge,
Would sink beneath the irritable sore.

Ah! sad and strange, as in bright summer morns
The earliest pipe of half-awakened clerk
Is output by the thought that Lister's eye
Will see that all is not exactly square,
So turns to dress the irritable sore.

Where are those foul discharges stopping breath,
Fouler than those by hopeless fancy feigned ?
Gone my pyæmic foes, to Hades sent
By hydrocarbons, which in checking death
Give life unto the irritable sore.

A MEDICAL SONG FROM "PATIENCE."

A New York medical man,
A very much advertised man,
A pills-in-variety, talk-in-Society,
Each-for-himself young man.

A Philadelphia man,
An *Index Medicus* man,
A think-it-all-gammon, this talk of Buchanan,
Great-medical-centre young man.

A Boston medical man,
A hyper-historical man,
An ultra-persimmon toward medical women,
A Harvard-or-nothing young man.

A Chicago medical man,
A wide-awake, ethical man,
A good-as-the-rest-of-you, more-than-abreast-of-you,
Down-on-the-East young man.

New York Medical Record, Dec. 3, 1881.

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Part First.

ORIGINAL COMMUNICATIONS.

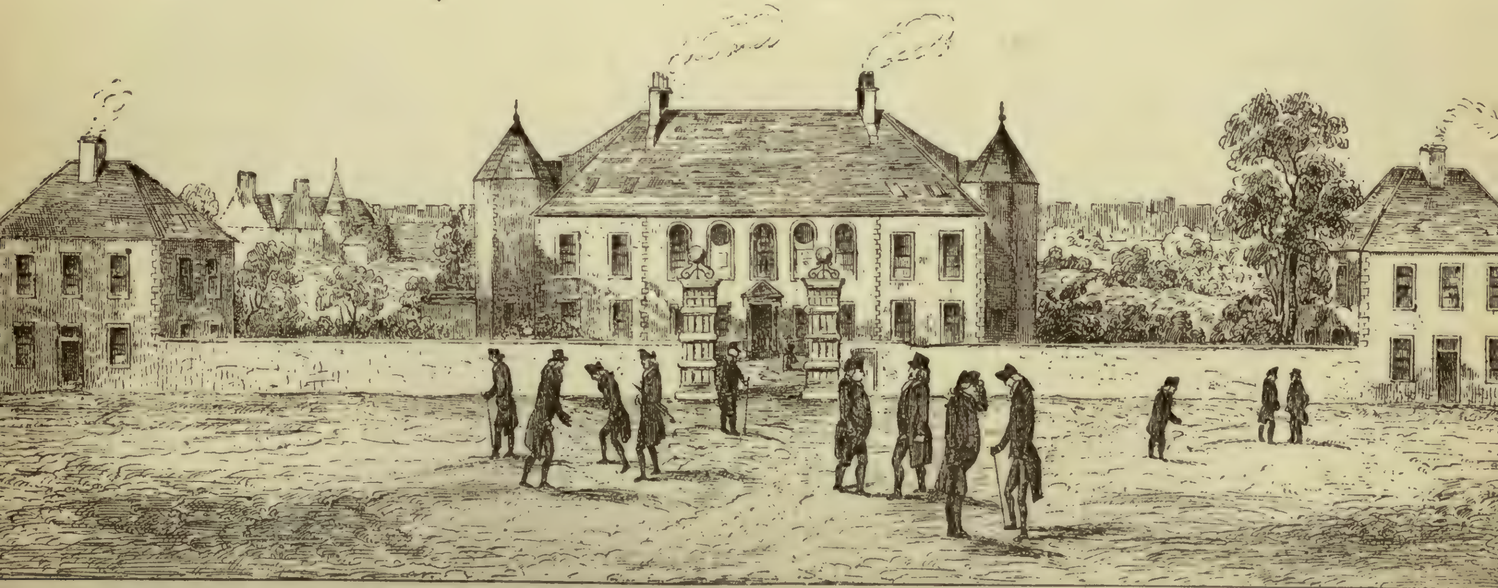
ARTICLE I.—*Some of the Older Schools of Anatomy connected with the Royal College of Surgeons, Edinburgh.* Introductory Address. By CHARLES W. CATHCART, M.B., F.R.C.S.

GENTLEMEN,—In appearing before you for the first time in the capacity of Lecturer on Anatomy in this building, it becomes me, in deference to the custom which is usual on such occasions, to choose for my discourse some subject which will have a more general bearing than that which would more properly form part of the winter's course of lectures. As some of you, I hope, may some day find under similar circumstances, the selection of a suitable subject is by no means an easy task; and, after some consideration and anxiety, I was thankful when at last I lighted on one which seemed to hold out a promise of fulfilling the conditions necessary for such an address. It seemed a natural thing that we should wish to know something of the history of the building in which we are now assembled, in which we are to be associated together, and under whose sheltering roof we are to study the great science of anatomy; and I accordingly set myself to gather what information I could which might throw light on this subject. It very soon appeared, however, that it would not be possible to consider this present "Surgeons' Hall" by itself; for since it had sprung up, as it were, from the remains of certain other buildings which had preceded it, while they in their turn were similarly connected with others which were earlier still, I saw that if we were to understand properly the historical position of any one of the extra-mural buildings, it would be necessary to give at least a brief sketch of those that had gone before it. Accordingly, I wish to ask your attention for a short time to-day to a brief consideration of "some of the older schools of anatomy connected with the Royal College of Surgeons of Edinburgh,"—how and when they originated, and what men taught within their walls.

As I proceeded with my inquiries I felt the greater confidence in the selection of my subject in proportion as I encountered difficulty in acquiring the information I wanted; for I became aware of the difficulty that at present exists of clearly tracing the localities with which were associated most of those great names—especially in anatomy, physiology, and surgery—which added so much to the reputation of Edinburgh as a medical school at the end of last and earlier part of the present century. The biographies of these men have been sufficiently fully written; but there exists, in reading these biographies, a constant and confusing allusion to buildings which have been long since swept away, and whose locality and surroundings are becoming daily more altered and obscured. One object, therefore, which I hope to attain is, that while directing your attention once more to the biographies of those great men who should be examples and incentives to you in your work, to make the study of their lives at the same time clearer and therefore more interesting. I shall, I hope, likewise bring again more prominently forward, that which some seem apt to forget—what a leading and important part our noble old College of Surgeons has played, in the progress of medicine in this city, and thus in Scotland and in Britain; and in doing this I should feel that I had partly failed, if I had not at the same time given you greater cause to be proud of your College, and to be more earnest in striving to be an honour to her name.

The sources of information which are at my disposal are numerous, and as the frequent reference to them would be wearying as well as distracting, I think it better to give a brief reference to the chief of them at the outset, so as to avoid coming back to them again. I have gleaned, then, from Struthers's *Edinburgh Anatomical School*, and his sketch of the life of the late Dr Handyside in the April, 1881, number of the *Edinburgh Medical Journal;* from the biographies of Barclay, Knox, Syme, and others; from Gairdner's *History of the Royal College of Surgeons;* Bowers's *History of the University;* and several miscellaneous sources. My thanks are due to Mr Fasson for his kind assistance in examining the old minutes of the Royal Infirmary; and finally, I am indebted to many friends who have furnished me with their personal recollections, especially to Professors Maclagan and Spence, and to Dr Keiller for his kind assistance and advice.

The first building which was devoted to the study and teaching of anatomy in Edinburgh was the original "Surgeons' Hall" (Fig. 1), belonging to what was then the Incorporation of Surgeons and Barbers. It stood on the south side of what became afterwards "Surgeon Square," and lay at no great distance within the Flodden wall of the city. Although other buildings were by degrees gathered round it so as to form three sides of a square, so far as I can trace, this was not for about a hundred years after the building was completed, and it will therefore be better to leave the consideration of "Surgeon Square" until we have traced "Surgeons' Hall" through nearly the first century of its existence. The building was erected to fulfil certain conditions which the Town Council had declared as necessary to the reception of certain privileges which



View of Old Surgeons' Hall from the North ; Flodden City-Wall in the background. From *Old and New Edinburgh*, by kind permission of the publishers, Messrs Cassell, Petter, & Galpin.

had been granted to the incorporation. This came about in the following way:—By the first royal charter of the Incorporation of Surgeons and Barbers, dated 1505, provision for the study of anatomy was made and expressed in the following quaint way:—"And that we may have anis in the yeir ane condampnit man, efter he be deid, to mak anatomea of, quhair-throw we may haif experience—Ilk ane to instruct uthers. And we sall do suffrage for the soule." This authority for the legal possession of subjects for dissection remained unchanged for 189 years, when, in October of 1694, an energetic member of the College applied to the Town Council for certain other bodies, for his own private use it would seem, for he secured as a gift for thirteen years all bodies of persons who might "dye in the Correction House," and those of foundlings that "dye upon the breast," as well as a room for dissection, and the use of the College churchyard for burials, on the condition that he would attend the poor gratis, and in other ways render service to the town in return.

The success of this application led to a similar one being made on behalf of the College itself, which resulted in the following grant of bodies in their favour:—

1. "The bodies of foundlings who dye betwixt the tyme that they be weaned and their being put to schools or trades;" also,
2. "The dead bodies of such as are stifled in the birth, which are exposed and have none to owne them;" as also,
3. "The dead bodies of such as are *felo de se*, and have none to owne them."
4. "Likeways the bodies of such as are put to death by sentence of the magistrat, and have none to owne them;" "which includes what former pretensions of that kind the petitioners have."

All this, however, on condition, and on this only, that by Michaelmas 1697 they should "build, repaire, and have in readiness" an anatomical theatre, where an annual public demonstration might be given.

This was in 1694, and in December 1697 the said building was completed, and stood as the original Surgeons' Hall. Eight years afterwards, in 1705, one Elliot applied for and obtained from the Town Council permission to use the theatre for public and private teaching of anatomy to servants and apprentices, and, being the nominee of the Corporation of Surgeons, was appointed. In August of the same year he petitioned the Town Council for some salary as remuneration for his services, and obtained a yearly sum of £15 as "encouragement," and thus we find in the nominee of the Corporation of Surgeons and Barbers the earliest representative of a professor of anatomy in Edinburgh.

In 1708, Adam Drummond was appointed to share the duties and remuneration with Elliot.

In 1716, J. M'Gill was appointed by the Town Council to succeed Elliot, deceased; and in

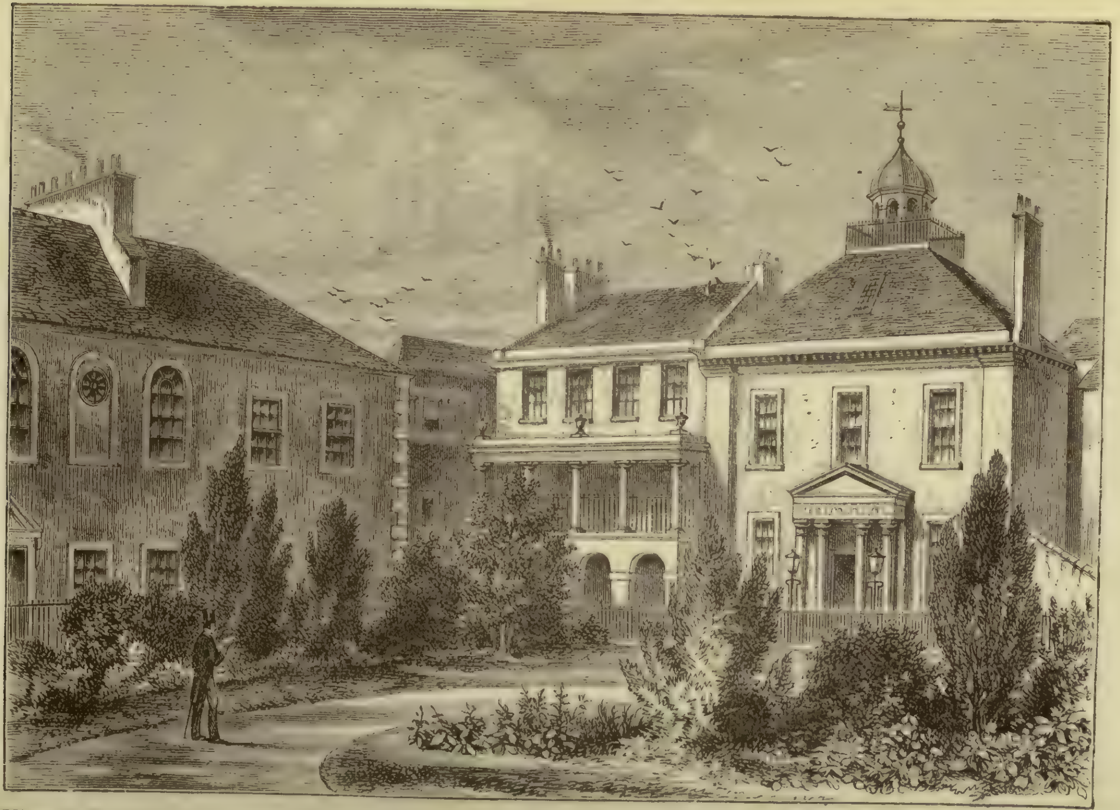
1720, both Drummond and M'Gill resigned their position in favour of Monro primus, who was then appointed in their stead.

In 1722, Monro, while still holding his College appointment, was raised by the Town Council to the position of Professor of Anatomy in the University, and continued to use the "Surgeons' Hall" for teaching purposes until the building was nearly burned down in 1725 in a "resurrection" riot. This led the Town Council to grant the University Professor a separate building of his own, and from that time onwards the two were separated.

Thus we have seen, not only that "Surgeons' Hall" was the first building publicly devoted to the study and instruction of anatomy in Edinburgh, but that it furnished the first professor of anatomy to the University, and supplied him with teaching accommodation until he had special buildings for himself; aid, gentlemen, of which our College may well be proud when we consider the truly magnificent proportions to which the anatomical department of the University has since grown, both in the excellence and spaciousness of its accommodation and in the wide and just reputation of its teachers.

Although our purpose here is to trace the building rather than the corporation which it sheltered, still it would be a pity if I were to omit the mention of two great steps in the latter's history which may fairly claim our attention now. One was the charter of 1695, in which the association with barbers was dropped, and the title of chirurgeons and chirurgeon-apothecaries alone used. The other was the charter of 1778, by which the corporation was raised to the rank of a royal college; so that you see our claim to the title of royal is now 103 years old.

From the time that Monro left Surgeons' Hall for the University buildings in 1725 until 1833, I have not been able to trace any noteworthy teaching of anatomy in the theatre of Surgeons' Hall; but from 1833 to 1840 it was again the scene of the most advanced and brilliant teaching of anatomy which then existed in Edinburgh, or perhaps in Great Britain. The celebrated Robert Knox here delivered his fascinating lectures, and filled the room to overflowing with an eager crowd of listeners. I shall have more to say of Knox when we see him in the house in which he taught as Barclay's assistant and successor from 1825 to 1832, and in which was transacted part of that awful tragedy which we shall afterwards briefly allude to as the Burke and Hare murders. The seat of the Royal College of Surgeons was transferred to the present building in 1832, but the College must have ceased to occupy it before this date, as we find that it was used as a cholera hospital, under the name of the "Drummond Street Cholera Hospital," during the outbreak of 1831–32. Mr Spence was then one of the resident medical officers, along with Dr Fearns, and remained till May 1832, when Dr Spittal took his place. It cannot, however,



View of South-west Corner of Surgeon Square in 1829.—Showing Old Hall of Royal Medical Society, Barclay's House, Old Surgeons' Hall, and Gordon's Class-room in the background. From *Old and New Edinburgh*, by kind permission of the publishers, Messrs Cassell, Petter, & Galpin.

have been used as an hospital for long after this, for we find a lease granted to Knox in August of the next year.

On referring to the minutes of the meetings of managers of the Royal Infirmary, I find mention of the following purchases of property in Surgeon Square in June 1833:—1. Surgeons' Hall, "in a very ruinous state," with a certain area of ground, not specified, in front of it, £600. 2. "House behind the Hall, built by the late John Bell, surgeon, on a feu from the College, . . . in excellent repair," £500. 3. Annual feu-duties of houses in Surgeon Square, amounting in all to £45, £1000—making in all £2100.

On the 5th of August 1833 there is a minute of approval of certain suggested improvements by Dr Knox, and a consent to grant him a rent of the Hall. He continued lecturing here till about 1840, when he transferred to Argyll Square, and the Infirmary managers made use of the Hall for their cases. It continued to be used for fever and small-pox cases till about 1874, when it was altered to form part of the Nurses' Home, and it is now being again altered with the view of being made part of the new Fever Hospital for the city. One of the workmen engaged on the present alterations in the old building showed me where a tunnelled passage had opened from the back of the building down to a cellar on the ground floor in front. This had probably been the means of entrance for subjects in Knox's time. He also pointed out many alterations that had evidently been made from time to time, and these, with the present complete reorganization of the interior, render it quite impossible now to trace any of the rooms in the old Surgeons' Hall. A story has been added since the accompanying engravings were made (Figs. 1 and 2, contrasted with Fig. 3), but we can still see the date 1697 over the doorway, and trace the holes for the iron stanchions in the ground-floor windows.

Having traced the great centre of Surgeon Square, *i.e.*, Surgeons' Hall, briefly from its foundation to its present condition, we may now with advantage turn to the square, and in like manner follow out the anatomical schools which we find there. By those who recollect it before it was altered to make way for the improvements in the Royal Infirmary it is described as having had three sides occupied by buildings, *i.e.*, to the south, east, and west, while to the north it opened towards the High School Yards (*v.* Plan of Royal Infirmary). In the centre stood a small unkempt plot of grass surrounded by a ledge of stone wall and a low battered railing, and between the grass plot and the houses the ground had once been paved, but had been allowed in its latter days to get so sadly out of repair that walking on it was never pleasant and often dangerous. The numbers in the square ran from the north end of the east side, along the east and south sides, to finish at the north end of the west side. It is difficult to trace them exactly now, but the following seem to be authentic. On the east side the numbers ran from 1 to 4; on the south No. 8 was old Surgeons' Hall; on the west No. 10 was Barclay's, afterwards Knox's, lecture-room; No. 11 the old Hall of the Royal Medical Society; No. 12 a private dwelling-house; and No. 13 a dispensary for women and children, at the corner where Surgeon Square opened into High School Yards. To the south-west of the west end of Surgeons' Hall stood No. 9, better known as John Thomson's lecture-room, while to the south-east of the east end of the same Hall was the house built for anatomical purposes by John Bell. By means of the sketches and ground-plans here indicated I think the position of these various buildings will be sufficiently clearly understood (Figs. 2 and 3). When I have run over, as I shall do immediately, the chief names associated with the various buildings, you will at once see the claim that this venerable square has to have its biography recorded as among the most noteworthy, at least to a medical man, of all the objects of interest in the Old Town. In the early part of the present century, at a time when, in some particulars, the University teaching lagged behind that of the extramural lecturers, few indeed of those great names, whose reputation afterwards reflected back such lustre on Edinburgh as a school of medicine, but are to be found among the teachers or the taught in this old square.

The first private building in point of time, that we find mention of as an anatomical school licensed by the Royal College of Surgeons, is that which stood somewhat behind the square to the south-east of the east end of the Hall. It was built in 1790 by the celebrated John Bell, who began his career as a teacher of anatomy, and established this building for that purpose. He was assisted, and in 1799 succeeded, by his still more celebrated brother Sir Charles Bell, who taught anatomy there until he left for London in 1804. John Bell may be considered as the founder of surgical anatomy in Edinburgh, and has left behind him one of the classical works on surgery in the English language, besides being one of the first European surgeons of his day; while Sir Charles, as an anatomist, physiologist, artist, and surgeon, has left a reputation to posterity of which any country might well be proud.

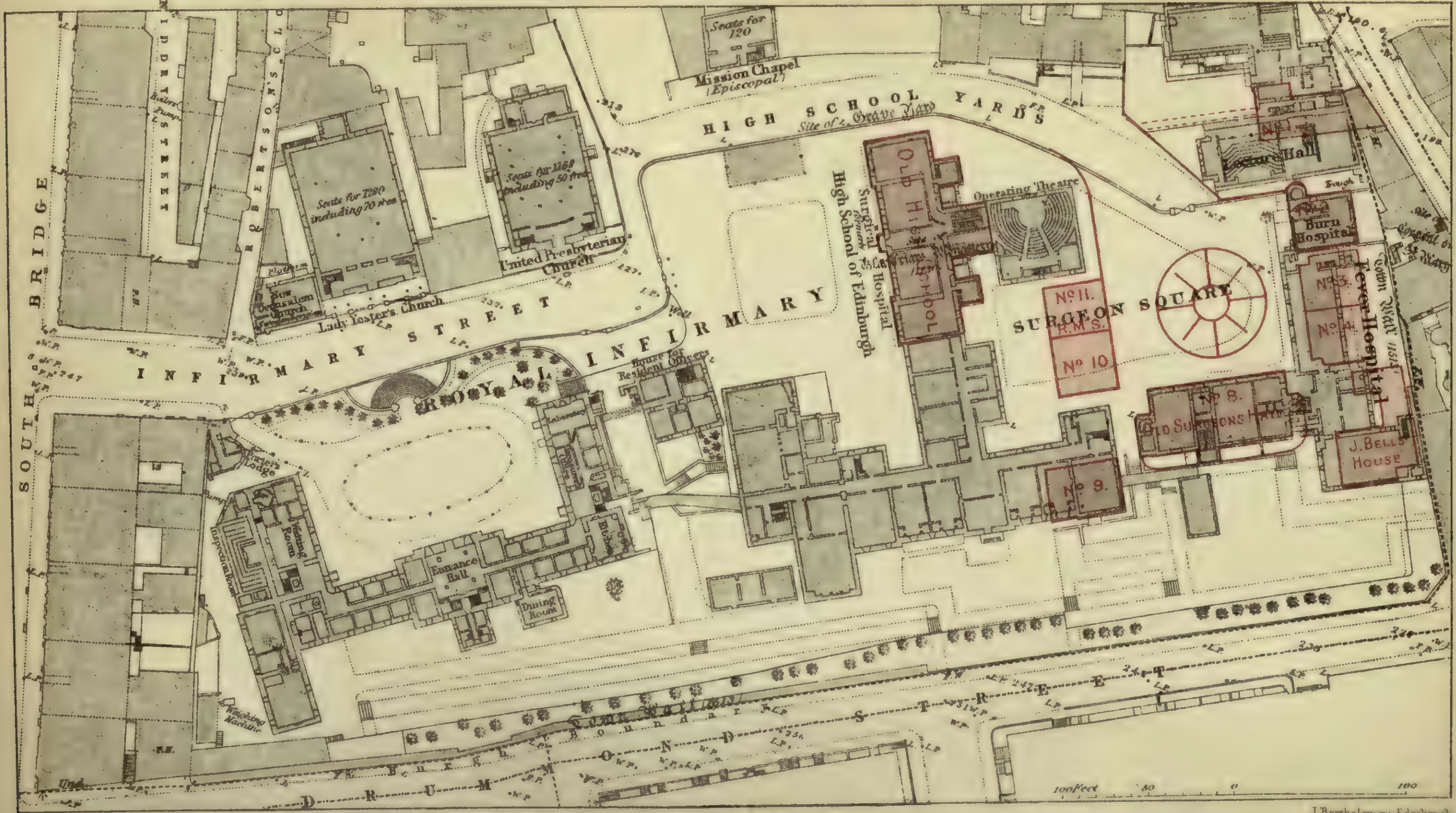
As a school of anatomy it was again used, this time by Dr William Cullen, from about 1822 to 1825. We find the following passage in one of the late Mr Syme's letters, dated 9th January 1825:—". . . Cullen has been obliged to disband his dissectors and return their fees;" and most probably it was from this building that he had to disband them. We find him afterwards succeeding Mr Syme in the Brown Square school, as indicated by Mr Syme in another letter, dated 10th January 1826:—"I take this opportunity of telling you that I have resigned my anatomical class in favour of Cullen!!!—from the difficulty, if not impossibility, of procuring subjects."

In a minute, to which I have already briefly alluded, of a meeting of the Royal Infirmary managers, dated 24th June 1833, I find this house described as having been bought by the managers

GROUND PLAN OF THE ROYAL INFIRMARY AT THE TIME IT WAS VACATED IN 1879,

WITH THE FORMER BUILDINGS IN SURGEONS' SQUARE COLOURED RED.

Fig. 3.



From the Ordnance Survey.

Although in the text there is no account of alterations in No. 1, since going to press a careful examination of old Maps makes it appear as if the original No. 1 had been pulled down, and the "Lecture Hall" built partly on its site, but nearer No. 2.

for £500 from the Royal College of Surgeons at the same time that the old Hall was acquired for a sum of £600, and certain other feu-duties, amounting to £45 annually, for £1000. The minute mentions that John Bell built the house on a feu from the College, and that the College afterwards bought it from a Dr M'Ansh for £800.

Until the College of Surgeons removed to their present building, this house contained the "Bell Collection" of their museum, and afterwards it was used for many years as a Lock Hospital.

The next building in point of time which claims our attention is that which was formerly No. 10 Surgeon Square, better known as Barclay's lecture-room. It stood in the south-west corner of the square, between the old Hall of the Royal Medical Society and old Surgeons' Hall. The north gable wall stood against the Royal Medical Society's Hall, while the south wall looked towards Dr Gordon's class-room, which has been described as somewhat behind the square, to the south-west of the west end of old Surgeons' Hall. By a reference to the drawing by Sheppard, dated 1829 (Fig. 2), this building will easily be recognised in the corner of the square by its arched and pillared portico, which reaches nearly to the windows of the second story, while the buildings which have been mentioned as in its vicinity will be sufficiently apparent from the description which has been given. We are told by Chambers that it was originally built as a lecture-room by Dr Duncan, senior, and that Dr Barclay bought it from Dr Ramsay, who in conjunction with Dr Latta had tried to teach anatomy there, but had failed. Dr Struthers mentions in a note that the theatre was above, and was enlarged from time to time as the class increased.

Dr Barclay, who had previously had a class in High School Yards, began to teach here about 1800, and continued till 1825, when he was succeeded by Dr Knox. For a considerable part of this time Barclay was the only extra-mural teacher of anatomy, and for the last twenty years he was certainly the most famous and the most popular. His work on *Muscular Motions* is very well worth reading at the present time, and his valuable museum, which he bequeathed to the Royal College of Surgeons, is still to be seen, and forms a valuable part of the collection.

In 1825, on account of failing health, Barclay took into partnership with him one Robert Knox, who was then conservator of the College Museum, a man of great energy and talent, a brilliant speaker, an enthusiastic student of comparative anatomy, and a rising human anatomist. In 1826 Barclay died, and Knox, succeeding him in full, very soon established himself as a most brilliant and popular lecturer. The lecture theatre, seated for about 150, was far too small for the numbers who thronged into it, and the same lecture had to be repeated once, sometimes twice, each day. There seems to have been a peculiar fascination about Knox's lectures never equalled before or since his time.

At this time, although the study of practical anatomy was very much less proportionally to other studies as compared to what it is now, still the demand for subjects was immeasurably beyond the legal supply, *i.e.*, the bodies of executed criminals, for the original privileges mentioned before seem by this time to have lapsed. Accordingly the practice of raising bodies from their graves for dissecting purposes was largely and systematically carried on. The work was done chiefly by gangs of degraded and unscrupulous men, who were handsomely paid for their trouble and risk. The sum of £8, £10, £12, and even £20 was paid for a single subject. Many were shipped over in barrels from Ireland, and not a few were surreptitiously despatched from London by the porters at the hospitals there when a higher price could be obtained in the north. In such a state of things we can understand how, when bodies came into the anatomical schools, no too particular inquiries were made as to their source, so long as they were in fairly good condition. Keeping this in mind, we may, perhaps, understand that which I must now briefly allude to—how Knox was implicated in the Burke and Hare murders as receiver of the bodies, without being himself in any way cognisant of the terrible crimes that were being perpetrated.

About 1828 two men of the name of Burke and Hare, with their wives or paramours, became aware of the current high market value of a dead human body, and they conceived the awful project of murdering poor and friendless strangers in the town for the purpose of trading in their bodies when they were dead. They made their victims helplessly drunk, in almost every case, and then suffocated them without much trouble. In this manner, within the space of eighteen months, they murdered and disposed of sixteen persons of all sexes and ages, and lived in comparative affluence on the proceeds. At last they were discovered, however, and brought to trial, and on Hare's turning king's evidence the whole story was made public. In every case the body had been carried to No. 10 Surgeon Square and sold to Dr Knox or his assistants, and a fierce popular cry was raised that Knox was an accomplice in the crime. In proportion as no proof could be obtained in any way implicating Dr Knox was the popular feeling more intense and the clamour greater, and Dr Knox's private house was sacked by the mob, while he himself barely escaped their fury. He did not cease lecturing during all this time, and attracted even larger classes than before. The general consensus of enlightened opinion at the time was, that Knox was culpable in having omitted to make inquiries as to the source from which the bodies came, under circumstances which might reasonably have given rise to suspicion, but that in every other way he was entirely innocent.

Knox continued to lecture in No. 10 Surgeon Square till 1833, and in August 1833 we find a minute in the managers' books approving of certain proposed improvements by Dr Knox in old

Surgeons' Hall, which had become their property in June of the same year, and consenting to grant him a lease of it, which he held till 1840. Knox afterwards lectured first in Argyll Square, and then in Nicolson Street; but in 1845 he left Edinburgh altogether, and spent the rest of his life in London and in the provinces. In 1863 he died in London, an old, neglected, and almost forgotten man. His popularity began to wane about 1836, and steadily declined till he left the city, and it never rose again. So far as I can gather, this is partly to be accounted for by his name having been associated with the Burke and Hare murders, partly by his bitter and merciless tongue, and partly by his overweening self-conceit, which led him to slight the opinions of others, however well founded, and to pander to the applause of his class, till his love for truth and fact became overborne by his craving for colouring and effect.

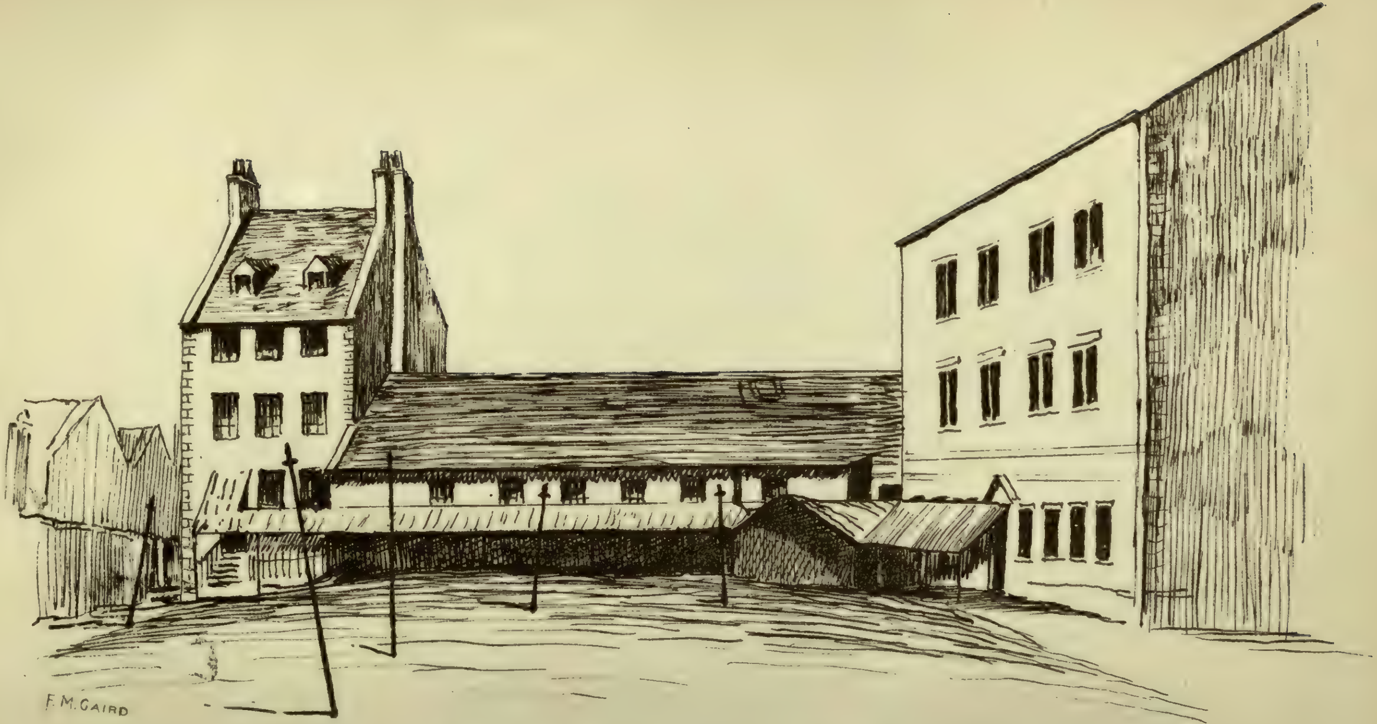
Before I leave this memorable theatre of Barclay's I must tell you that here, among other famous men, Fergusson, afterwards Sir William; Liston, who became one of the great London surgeons; Mr Nasmyth, the first Edinburgh dentist of his time; Mr William M'Kenzie; Reid, the late celebrated Professor of Physiology in St Andrews; and Wharton Jones, the ophthalmic surgeon, who has only lately retired after a long and honourable career, were all in turn demonstrators or assistants to Barclay or Knox, and are themselves all men of whom our town or country may indeed be proud. The house itself stood till 1850. In 1849 it, along with houses on the east side of the square, was bought by the managers of the Royal Infirmary with a view to the proposed extension of the Surgical Hospital, and on the 9th December 1850 a letter from the President of the Royal Medical Society was sent to the managers of the Royal Infirmary, complaining that the south gable wall of the Society's hall had been injured by the pulling down of the adjacent building, and this we have seen was no other than Barclay's lecture theatre, so that we have thus marked out for us the exact date of its removal. The place where it stood is now part of the green just in front of the eye wards in the old Royal Infirmary.

Passing now to No. 9 Surgeon Square, we have already seen its position to be somewhat behind the square, facing the south gable of Barclay's house. It is seen in the background in Sheppard's drawing, between old Surgeons' Hall and Barclay's house. The well-known Dr Gordon (father of the late Sheriff Gordon), who died comparatively young, taught here, and had a good class of anatomy, from 1808 to 1818, in spite of the strong counter-attractions in the neighbouring building. Later on we find that the house was bought by Dr Thomson, father of Professors W. and A. Thomson of Glasgow, and that he here taught surgery. Dr Sharpey, afterwards the celebrated Professor of Physiology in University College, London, conducted an anatomy class here, beginning at a later date and continuing till 1836, when he went to London, and he was assisted by Dr, afterwards Professor, Allen Thomson, who also at the same time lectured on physiology here. It was afterward acquired from Dr Thomson's representatives by the Royal Infirmary, and used as a fever hospital, for we find, in a report dated 1848, mention of its having had 224 cases of fever during a recent epidemic, and as being the house "lately bought from Dr Thomson's representatives." It was pulled down to make room for the new Surgical Hospital, which was begun in 1850 and finished in 1853, and we can still localize its position, because we are told that the new ophthalmic ward was to stand on the site of Dr Thomson's house. It is interesting to note that, besides the above-mentioned, the following future Professors lectured in this building:—Drs Turner (first Professor of Surgery), J. Y. Simpson, J. Hutton Balfour, and Douglas Maclagan.

Of the houses on the east side of the square we may now take up No. 3, where a Dr Smith, and afterwards, in 1818, Dr Craigie, taught a small class of anatomy. Dr Craigie did not lecture for more than four years, and this building is better known as the place where Drs Fyffe and Anderson had their laboratories and taught chemistry. Professor Maclagan lectured here on materia medica for a time, after No. 9 was sold to the Infirmary. No. 3 was bought in 1849 by the managers of the Royal Infirmary, and became the site of the then new fever wards, which are still standing, and will form part of the new fever hospital.

In No. 4 we find that Dr John Aitken lectured for a year or two on anatomy, and that here my respected predecessor, Dr Handyside, opened his first class of anatomy in 1833, and thus began his career as a teacher in this city. In spite of the opposition of Knox, then in the adjoining building to him, and still in the height of his fame, Dr Handyside soon gathered together a considerable class, and established himself as a thoroughly good and successful teacher of anatomy. At the end of five or six years Dr Handyside left to succeed Mr John Lizars as lecturer on surgery in No. 1, and he was succeeded by Dr Mercer, who taught here till 1847. In 1849 the house shared the same fate as No. 3, being pulled down to make room for the new fever wards.

At No. 1 Surgeon Square we find Mr John Lizars teaching anatomy and surgery for several years. In 1841 Dr Allen Thomson opened and continued for about a year one of the largest and best-conducted anatomical classes then in the extra-mural school; but in the following year, being appointed to succeed Professor Alison as Professor of Physiology in the University, he resigned it into the hands of Messrs Handyside, Lonsdale, and Spence. Dr Handyside undertook the systematic lectures, Mr, now Professor, Spence chiefly the practical anatomy, and Dr Lonsdale the general details of management. Of those three we have already seen that Dr Handyside had previously taught anatomy for some years at No. 4 Surgeon Square, Mr Spence had been a demonstrator in the University dissecting-rooms under Professor Monro, and Dr Lons-



SOUTH AND EAST SIDES OF SURGEON SQUARE, 1879.

FROM A SKETCH BY MISS THOMSON.

dale had been the assistant, and was now the successor, of Knox, having acquired the museum of the latter, with a promise that he should not lecture again in Edinburgh, for a sum of about £900.

This triple alliance commanded a large class, and continued till 1845, when Dr Lonsdale left Edinburgh for Carlisle, and Dr Struthers—now the Professor of Anatomy in Aberdeen—was taken as demonstrator. Next year, *i.e.*, 1846, the long effete Professor Monro tertius resigned his chair, and was succeeded by the great John Goodsir. Mr Spence then resigned the teaching of anatomy for that of surgery, and Dr Handyside, who had been a candidate for the chair of anatomy, removed from Surgeon Square to the school in Argyll Square, taking with him Dr Struthers as demonstrator.

In this building Dr Bennett, afterwards Professor of Physiology in the University, lectured on practice of medicine. Its after history is that Mr M'Kenzie Edwards lectured here for two or three years on surgery, and, on his leaving Edinburgh, that Mr Joseph Bell succeeded him, and continued lecturing from 1864 to 1879. Dr Miller afterwards took Mr Bell's place, but latterly it has been abandoned by the medical profession and is now used as a gymnasium. Part of the building was used as the Phrenological Museum for some years, and the name is still standing on the end of the west gable, although the specimens are now transferred to the new premises in Chambers Street.

No. 2 Surgeon Square was never used as a medical school. It was at one time, however, occupied as the office and examination hall of the Royal College of Surgeons. Professor Maclagan, among others, here passed his examination for the licentiateship in 1831. It was afterwards marked in the Directory as a private dwelling-house, and in later years, when under the management of the Royal Infirmary, was used for small-pox cases, and, still later, as the lady superintendent's house and nurses' home (see Fig. 3).

Having now completed what I have to say as to the schools of anatomy in Surgeon Square, I must turn back to the year 1825 in order that I may trace a school which was known as the "Brown Square" School, and then we must run on to the school in Argyll Square, and finally to our present building, "Surgeons' Hall."

In the beginning of the session 1824-25 a new school for medical instruction was opened in Brown Square with the following teachers:—Mr Syme, afterwards the celebrated surgeon, undertook anatomy, practical anatomy, and surgery; Dr Mackintosh, medicine and midwifery; and Dr Fletcher, physiology. Their success was great, and an endeavour was made to obtain a separate charter as an extra-academical school, but this idea was not carried out. In 1825 Mr Syme resigned the anatomical class in favour of Dr Cullen, who then came from Bell's class-room in Surgeon Square, and continued in this building till his death in 1828, when his place was taken by

Mr A. J. Lizars, who afterwards became Professor of Anatomy in Aberdeen.

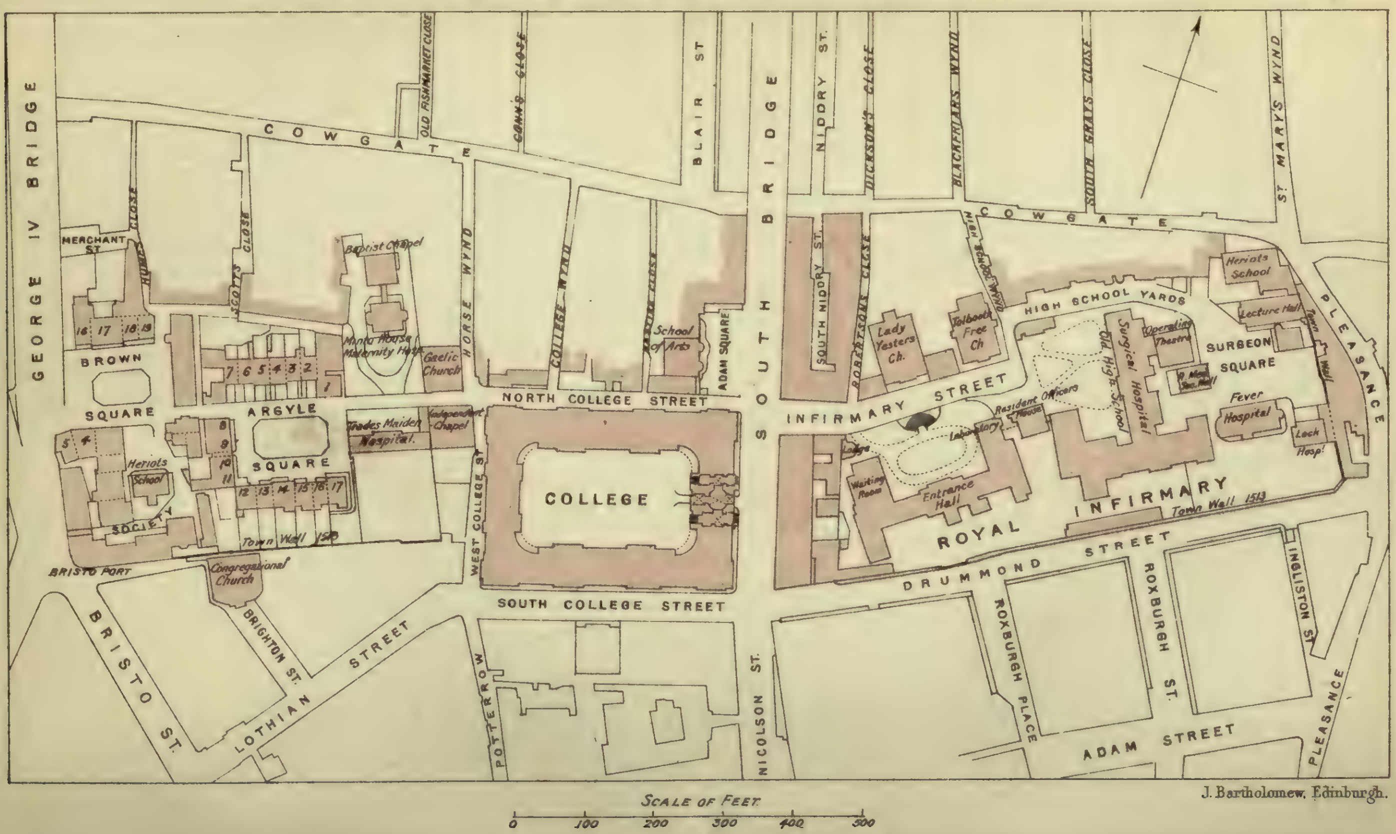
The Brown Square school seems to have continued till about 1836, when its teachers transferred their lecture-rooms to No. 11 Argyll Square. Neither of these squares are now standing, but their positions can be sufficiently well indicated by reference to the accompanying copy of an old map of Edinburgh. (See Fig. 4.) At No. 11 Argyll Square Mr Alexander J. Lizars continued as the lecturer on anatomy from 1836 till 1840, when he removed to Aberdeen as the Professor of Anatomy there. Dr Knox, as we have already seen, at this time transferred his museum here from old Surgeons' Hall, and continued lecturing on anatomy till 1842, when he sold his museum and right of lecturing to Dr Lonsdale. As the latter gentleman then joined Drs Handyside and Spence in No. 1 Surgeon Square, the lectures on anatomy were continued by Dr Skae, while the practical anatomy was conducted by one whom we are all glad to claim now as our senior lecturer in this present building, Dr Keiller.

In 1846 Dr Skae was succeeded by Dr Handyside, who at this time, as we have seen, came over from Surgeon Square, with Dr Struthers as his demonstrator. Two years later, *i.e.*, in 1848, Dr Handyside handed over the anatomy class to Dr Struthers, in order that he might devote himself without reserve to the claims of a large and increasing surgical practice. In the following year, 1849, the buildings in Argyll Square were pulled down to clear a site for the new Industrial Museum, and the lecturers were left to seek accommodation elsewhere. Unless it had been for the energy of one or two of the lecturers of that day, it is impossible to say where a building in succession to 11 Argyll Square might have been got; but Dr Argyll Robertson, father of our present lecturer on ophthalmology, and Dr Keiller, assisted by Dr Struthers, after some difficulty, induced the Royal College of Surgeons to erect the building in which we are met as a medical school, and sent to it a body of lecturers who at that time represented the whole of the extra-mural teaching in the city, with only one exception. This was Dr George Wilson, who preferred to remain in his house in Brown Square, where he lived as well as taught. When the first session of Surgeons' Hall opened, the lecturers were as follows:—Dr Campbell taught in midwifery; Mr M'Kenzie, a rising surgeon, who died in the Crimea, in surgery; Dr Keiller in medical jurisprudence; Dr Maclagan, materia medica; Dr Struthers in anatomy.

In 1863 Dr Struthers went to Aberdeen to fill the chair of anatomy there, a post which he holds up to the present time; and at that time Dr Handyside, having returned to Edinburgh from the Continent, whither he had been driven through ill health, once more resumed the teaching of anatomy, and continued it, as you all know, faithfully and well, till a short time before his death at the early part of the present year (1881).

Fig. 4.

PLAN OF PART OF EDINBURGH IN 1850,
SHOWING BROWN SQUARE, ARGYLE SQUARE, UNIVERSITY, & ROYAL INFIRMARY.



And now, gentlemen, I have fulfilled my task, so far as I have been able in the brief time allotted to me. I have taken you back to the most of our "older schools of anatomy." I have tried to trace them one by one, and record, though only in the briefest way, the men who have taught within their walls. I hope it has been with you, as it was with me, a matter of pleasure and surprise to find what a long list of princes in the profession our Royal College has fostered and sent forth. At a time when some would wish to deprive us of many of our most cherished rights and privileges, let us remind them of what our College has done for medicine in the past, how it is advancing with modern progress in the present, and what a just hope it gives of a still brighter prospect in the future. And you, gentlemen, have your part to play, which is neither small nor unimportant. Do you see to it, one and all, that whatever your sphere may be, wherever you may go, your skill, your earnestness, and your honour may be an ornament and a pride to your College.

One word more, and I have done. Among the prominent figures whose history we have traced to-day, few have played a more important part than that of the late Dr P. D. Handyside. A teacher of anatomy in all for twenty-seven years, he maintained the respect and esteem of his pupils to the end. What he did for our noble Medical Mission Dr Miller told you but yesterday; what he did for anatomical teaching is fresh in the minds of all. Generous to rivals, courteous to all, Dr Handyside has well merited that highest of all praises, "a Christian gentleman." And as our work goes on from day to day in the rooms where he taught so long, may the spirit that dwelt in him hover round and in us still. Whatever we say, whatever we think, whatever we do, may it all be guided by that same spirit of "a Christian gentleman."

ARTICLE II.—*Case of Basilysis.* By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh; President of the Obstetrical Society; and Vice-President of the Medico-Chirurgical Society of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society, 11th January* 1882.)

Two years ago I laid before the Society a suggestion for facilitating the perforation and comminution of the fœtal head in cases of contracted pelvis where it was impossible to extract a living child at term. The basilyst, the simple instrument which I subsequently showed to the Society, was intended first to be used for perforating the vault of the skull, and then to be passed on so as to perforate and break up the more unyielding bones of the base (see Fig. 1).

I have repeatedly proved its efficiency on the dead fœtus and the phantom; but until lately I have had no opportunity of making trial of it in the living subject. Last winter I took the instrument with me to a case of labour in a patient with a flat pelvis, in whom in a previous confinement I had been obliged to deliver the woman by cranioclasm; but finding the conditions favourable for giving the child a chance of being born alive by version, with the assistance of Dr Hart and Dr Barbour I turned, with satisfactory results to mother and child.[1] It was only last month that I had for the first time occasion to prove the value of the basilyst in a patient in the Royal Maternity and Simpson Memorial Hospital. I give the history of the case as it has been drawn up by Mr Hewetson, M.B., Buchanan Scholar for 1881, and House Surgeon to the Maternity.

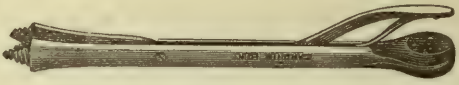


FIG. 1.

"Mrs M., a III. para, aged 27, and residing at Lanark, was admitted into the Maternity Hospital on 7th November 1881.

I. *Anamnesis.*

Her *menstruation* began at the age of 15, was of the 28-day type, usually lasted three or four days, and was moderate in quantity.

The date of her *last menstruation* was from 21st to 24th January 1881. She first felt the movements of the child in May. The *condition during pregnancy* was very good.

Previous Obstetric History.—In December 1878 patient was delivered of a female child after a labour lasting two days and three nights. Dr Ewing of Lanark finally delivered the patient by craniotomy, without the aid of chloroform.

In July 1880 patient was delivered by Drs Ewing and Gray of Lanark, after a labour of twenty hours. The child was a male, and craniotomy was again found necessary, chloroform being used on this occasion.

Patient made a rapid recovery after both labours.

II. *Physical Examination, three days before labour* (*7th Nov.*)

Abdominal Examination.—Palpation.—The uterine tumour was found to be of large size, the fundus being on a level with the ensiform cartilage. The tumour deviated somewhat to the right side, and projected forwards in an unusual degree. The umbilicus was below the most prominent portion of the tumour. The abdominal walls were rather tense.

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[1] The case forms one of the series recorded by Dr Hart in his paper on "The Causation of the Movements of the Head at the Brim of the Rickety Pelvis," *Edin. Med. Jour.*, vol. xxvii. p. 613, 1882.

The *head of the child* was felt freely movable above the brim of the pelvis, the back being to the right side and the small parts to the left.

Auscultation.—The fœtal heart was heard most distinctly to the right and slightly above the umbilicus, the whole fœtus being rather high in the abdominal cavity. The uterine bruit was heard on both sides of the abdomen, but most distinctly on the left.

Vaginal Exploration.—Fourchette gone. Perineal body intact. Vagina roomy, long, and moist. Cervix patulous, high up. Orifice irregular; admits the tip of the middle finger. Fœtus not felt on vaginal examination.

Measurements of Pelvis.

Ilio-cristal = 9 inches
Ilio-spinal = 6¾ „
External conjugate = 6¾ „
Diagonal do. = 3⅝ „
True do. = 2¾ to 3 inches.

Diagnosis of presentation, vertex : position, R.O.P.

Prognosis. Labour within a week, instrumental.

III. *Labour on November 10th.*

Pains began at 1.30 A.M. They were strong and frequent. The waters escaped at 1.45 A.M., and the os was fully dilated at 5 A.M.

Presentation vertex; position R.O.P.

Stage I. 3½ hours; II. 1 hour 20 minutes; III. 10 minutes.

Patient went into labour rather suddenly, and the membranes burst about a quarter of an hour after the commencement of the pains. Examination at 2.30 A.M. showed the os about the size of a two shilling-piece. Professor Simpson found, on his arrival shortly afterwards, that, in addition to the narrowness of the conjugate diameter which had been previously made out, the *transverse* diameter also was greatly contracted. The pelvis, therefore, was *generally* small, with a specially marked contraction in the conjugate of the brim. He also found that the head was very large, and that the relations of the pelvic diameters to one another and to those of the head were such as to prevent the application of either forceps or turning with any prospect of success. The posterior fontanelle was felt through the caput succedaneum, near the right sacro-iliac synchondrosis. The sagittal suture lay in the right oblique diameter of the pelvis, but rather nearer to the pubes than the promontory. The anterior fontanelle could not be felt, the head being markedly flexed.

As soon as the os was fully dilated, Professor Simpson perforated the presenting part of the cranial vault with the basilyst. The instrument was then passed on to the base of the skull and screwed firmly into it, so that on moving the instrument the head could be felt through the abdominal walls moving with it. The lever of the basilyst having been projected, the point was again screwed in on either side of the opening first made. The base of the skull being now extensively broken up, the basilyst was withdrawn, and a cranioclast was applied, with which, there being no pains at the time, traction was made. After the first traction the head was found to descend so easily, the uterine efforts having recommenced, that its expulsion was then left to nature. The large body of the child, however, required considerable traction for its delivery. The placenta was expressed with some little difficulty, and the vagina was syringed with warm carbolic lotion. A hypodermic injection of ergotin was given before the birth of the placenta. Chloroform was given early in the labour for the purposes of examination, and its administration was kept up till the completion of the delivery.

The Child.—The child was a very large and well-formed female, measuring 21 inches in length, and weighing 8½ lbs. without the portion of the brains and blood removed by craniotomy. The following were the head diameters, etc.:—

Diameters.—O.M., 5½; O.F., 4⅞; S.O.B., 3⅝; Bi-P., 3½; Bi-T., 3; T.B., 3½. Diameter of the base of the skull transversely, immediately behind the ears, in the uncompressed state, 3 inches. The same diameter when compressed laterally, 2 inches. Circumferences of the head—O.M., 15½; O.F., 14⅛; S.O.B., 12½.

The following head-markings were observed—1. A perforation through the right half of the lambdoidal suture, about an inch from the posterior fontanelle. The posterior portion of the right parietal bone had been broken, and the adjoining edge of the occipital bone had been notched by the passage of the basilyst. 2. A broad groove running along the right side of the head from the perforation to the right ear, and marking the grip of the cranioclast. In the track of this groove the right parietal and squamous portion of the right temporal bone were extensively comminuted. 3. A bruise on the left cheek, near the angle of the mouth, about half an inch in length.

On introducing the finger through the perforation in the vault, the body of the sphenoid and the petrous portions of the temporals, especially the left, were found extensively broken up; and on compressing the base of the skull laterally its diameter was easily reduced by one inch, as noted above.

Circumference of shoulders, . .	16¼	inches.
„ chest, . .	13	„
„ abdomen, . .	13	„
„ round trochanters, .	12¾	„

The placenta was discoid, measuring 6 inches in diameter, and weighing 1 lb.

IV. *Puerperium.*

Patient made an excellent recovery, the temperature never rising above 99°·2, and only reaching that point on one occasion, viz., on the evening of the fourth day, corresponding to the full development of the following slight complication. On the morning of the fourth day a few circinate patches of erythema appeared on the cheeks. These patches were at first of a rose-red colour, but afterwards became slightly purple. The patches soon extended over the whole face, which became considerably swollen. There was slight itching and a little headache. On the following day the eruption appeared also on the arms. Patient was ordered a saline purge followed by an alkaline mixture, and zinc ointment was applied to the face. On the second day P.P. belladonna plasters had been applied to the breasts. These were removed on the development of the eruption. The eruption was much less on the sixth day, and disappeared on the seventh. Patient states that she had a similar eruption after her second confinement. No belladonna was applied to the breasts on that occasion.

Note.—The uterus after delivery was noted to be of unusual size, so that, even when firmly contracted, the fundus was fully an inch and a half above the umbilicus. The involution proceeded satisfactorily during the puerperium.

V. *Condition on Dismissal on 24th November*, P.P. 14.

General condition very good. Breasts flaccid, no secretion. Fundus uteri three fingers' breadth above the pubes, lying forwards. The os notched on both sides, looking backwards. Perineum intact. Vagina and other pelvic tissues normal."

This case is, as I have said, the first that gave me an opportunity of testing the efficacy of the basilyst, and it has satisfied me that in basilysis we have the simplest, safest, and most efficacious method of head-diminution.

It is an easy operation. The head of the child is kept fixed at the brim by the hands of an assistant. The operator, guiding the basilyst with the fingers of the left hand in the passages, guides the front of the basilyst, which is held in the right, to the most exposed parietal bone. Twisting it round once or twice, he feels that the point has pierced the scalp and bitten into the skull. Then he steadily screws it on till it is arrested at the shoulder. (See Fig. 2.) He presses the spring handle till it touches the other, so as to open it as widely at the point as possible; lets it close, and, after turning it half round, opens it again, so as to make the gap as wide as he can. The instrument is then pushed on into the cavity of the skull and turned about in every direction, so as to break up all the brain and tear the tentoria. It may now be withdrawn, and a finger may be carried through the opening to feel for the foramen magnum and the parts in the base of the skull. Or if the operator have already, from his previous examination, got a clear impression of the position of the head, he may quite safely direct the basilyst at once towards the sphenoid bone. He can help to steady the head with a finger pulling on the parietal bones through the perforation in the vault, and screws in the basilyst up to the shoulder. Compression of the handles again separates the points; but now it is the base of the skull that is being comminuted, and the separation of the points may be effected in different directions to make the dissolution as complete as possible with each perforation. In the patient whose case I have read the perforation was repeated twice in the petrous portions of the two temporal bones. In more difficult cases the perforation could be repeated more frequently and in different directions.

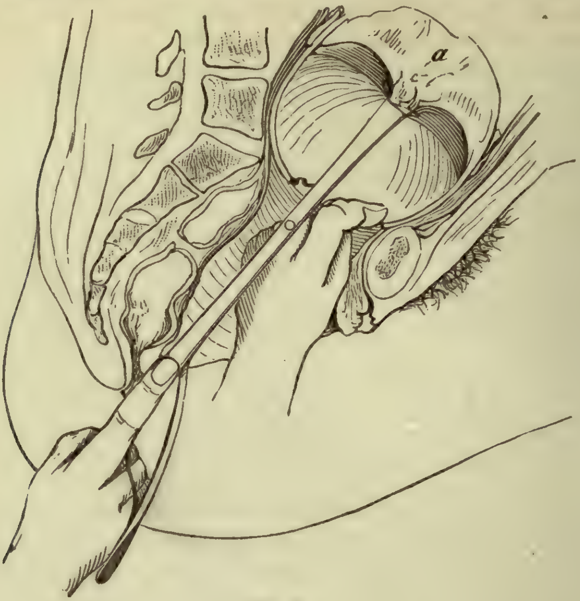

FIG. 2.

It is a safe operation. When the sharp point has been carefully applied to the fœtal head and has just bitten the skull, the operator may leisurely examine again the relations of the maternal parts, and screw on the basilyst with the certainty that it will not slide off in any direction or endanger maternal textures in any degree. Nor are the uterine walls in any danger when the point of the instrument is inside the skull. The operator finds it easy to direct the basilyst against the base, and the shoulder will certainly prevent the point from being screwed so far through the bones as to endanger the perforating of the cutaneous surface, much less to endanger at any point the interior of the uterus. I refer only to the absence of dangers that might be supposed to attach to the process itself, and do not dwell on the dangers of other procedures it is designed to supplant.

It is a satisfactory operation. It brings about such a dissolution of the hard, unyielding basis cranii that it becomes possible for the uterine effort to expel the comminuted head through the contracted canal. The report records how I applied the cranioclast in the case I have related. But I did not take account of the likelihood that the inactivity of the uterus was but temporary from the sudden reduction of size of the head—a kind of pause in its action such as we see in any case where some part of its contents suddenly escape, and a kind of tonic retraction goes on for a longer or shorter period before the effective pains return. But it notes also how completely the base was dissolved by the action of the basilyst, and how the head was eventually expelled easily and safely by the uterine action. In any similar case I should content myself with waiting for the expulsion of the head by the natural efforts, and with having recourse, if necessary, to repeated applications of the basilyst to other parts of the cranial base. Or, if the delay seemed to be due to imperfect collapse of the vault, it would be easy to break it down further by another perforation.

ARTICLE III.—*Fibromyxoma Duplex Ovariorum.* From the Clinic of Professor SLAWJANSKY. By Dr A. POPOW, M.D., of Pensa. Communicated to the Obstetrical Society of Edinburgh by Dr MATTHEWS DUNCAN.

(*Read before the Edinburgh Obstetrical Society, 8th February* 1882.)

ON the 13th of April 1880, M. P., aged 38, died in Professor Slawjansky's clinic of cirrhosis of the liver and ascites. The right ovary was the size of a goose's egg, rough, compact, and covered with false membranes; the left was like it, but of the size of a hen's egg. The uterus was covered before and behind with false membranes. Microscopical examination of the uterus showed that a chronic interstitial process was going on in its walls. The microscopical investigation of little knots found at the peritoneum showed a lymphomatous structure. On investigating the histology of the ovaries we found that new growths of connective tissue had been developed in their stroma, containing in some places myxomatous tissue. Since ovarian connective-tissue tumours seldom occur, and much difference of opinion exists as to their origin, as is shown by the work of Leopold,[1] so we took much interest in this case, as the swelling has not yet been described which here presented itself. After the false membrane was removed from the right ovary its measurements were the following:—Length 5·6 mm., breadth 3·5 mm., thickness 3·2 mm., circumference 13 mm. It was irregularly round in shape, and of solid consistence. The length of the ligament of the right ovary was 1 cm. On section two closely placed masses were seen, one red-brown, the other white. The first appeared, under the microscope, to be an extravasation in the position of an old corpus luteum, completely separated from the neighbouring stroma. The other was also isolated from the surrounding tissues; it had a fibrous structure, and had developed from an old corpus luteum. The microscopical preparations of the ovary showed the following structure:—The surface of the ovary was covered with well-preserved, short cylindrical epithelium. This layer had a wavy outline, with protrusions and depressions corresponding to the irregular surface of the ovary. Immediately beneath the epithelium was a shining line, the so-called albuginea of authors. Next came a layer of tissue representing the zona parenchymatosa, consisting in this case of interlacing bundles of connective tissue, and containing no trace of follicles. The bloodvessels were few in number. Instead of follicles in different stages of development, tubular and sac-like structures were found in the connective tissue representing the intercellular spaces and lymphatic channels, filled with cell elements. These structures resembled the tubes and lacunæ of Valentin and Pflüger, but their continuity with the surface epithelium could nowhere be traced. The mucoid degeneration of the cell elements filling the lymphatic spaces was demonstrated by the reaction with acetic acid and caustic potash. In the part of the ovarian tissue representing the normal zona vasculosa, besides the vessels, a pretty considerable quantity of myxomatous tissue occurred. It consisted of an intercellular substance having the reaction of mucin, and of numerous spindle-shaped and notched cells. The tissue surrounding the myxomatous structures consisted, particularly near the vessels, of numerous round elements, between which a number of transition forms were seen. Thus the whole tissue of the ovary, excepting the vessels, consisted of numerous compact portions of connective tissue mixed with myxoma, and of lymphatic spaces whose cell elements had undergone mucoid degeneration.

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[1] "Solide Eierstocksgeschwülste," *Arch. f. Gynæcol.*, B. vi., 1877, pp. 189-239.

The length of the left ovary was 3·5 cm., breadth 2·5 cm., thickness 2·8 cm., circumference 12 cm. The left ovarian ligament measured 1·3 cm. Microscopical preparations showed the same structure as the right ovary, only that the newly formed fibromyxomatous tissue was in an earlier stage of development. Thus in this case we have a double fibromyxoma of the ovaries. The origin and growth of the tumour may be explained in the following manner from the results of the post-mortem examination and of the histological investigation of the tumour:—The patient suffered from leucæmia, which sets up chronic interstitial inflammation in the ovaries as well as in the other organs—the connexion between leucæmia and inflammation of the ovaries having been shown in 1875 by Lebedinsky.[1]

On this foundation of chronic inflammation the new formation described by us was developed, some of the elements becoming compact connective tissue, the rest myxoma. Besides that, a great part of the cells in the lymphatics and intercellular spaces, for some unknown reason, underwent mucoid degeneration. The connexion between leucæmia and the formation of myxomatous tissue in the ovary has already been pointed out by Galabin[1] in his description of a myxosarcoma of the ovary.

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[1] "Zur lehre von den Erkrankungen des Eierstocks. Seine Veranderungen bei Leukæmie betreffend," *Medicin Wjestnik*, 1875, Nos. 12, 13 (Russian).

ARTICLE IV.—*On Non-Volitional Muscular Action* (*An Analysis of the Involuntary Motions of the Hand*). By PERCY R. WILDE, M.B.

(*Continued from* p. 534.)[2]

OUR motor life is a constant transition from the volitional to the automatic. There is a gradual diminution in the number of central stimuli required for the completion of an action, and in the intensity of the impressions which precede them. In the forms of activity which we have made our own, the hand (the chief agent by which we make mental results take external forms) responds reflexly to sensations and ideas, so that the act which formerly occupied the whole sphere of consciousness now engages so little of it, that cerebral modifications of a wholly different nature and of a complex character can be carried on at the same time. Thus the "cobbler" plies his trade, taking up and using wax and thread in their proper places while the mind is profoundly engaged, perhaps, with the lofty problems of a new theology.

The sympathy between the mind and the hand (if the word may be used to express the relation between an intelligence and a machine) is noticeable in oratory, where the hand is used to aid in the expression of the emotions and ideas, and never so effectively as when it acts reflexly to them, without direct volitional intervention. This reflection of conscious and unconscious cerebral processes by the hand gave rise at an early period to the conception that the hand possessed, or was sometimes possessed by, an intelligence within itself, and this view, variously expressed, has occurred at intervals up to the present period. The very latest phase of this is the so-called "mind-reading" experiments, in which a person concentrates his mind upon an object, the position of which is unknown to the operator, but who, nevertheless, is able, by grasping the hand of the person, to lead him to the exact spot of which he is thinking.

The wonder which this experiment excites, both in the person whose "mind" is thus read and in those who witness the 'experiment, will be considerably lessened if they undertake the part of the operator themselves. In some experiments I have tried recently, I find that by allowing my band to remain perfectly passive, and leaving the subject to initiate movement—which he does unconsciously—I generally obtain sufficient guidance to lead me to the spot upon which his attention is concentrated. Like all similar experiments, it is not always successful. Some people are "not good subjects," or "have not sufficient power of concentration," the fact being that those who guard against involuntary muscular movements invariably prevent the experiment from attaining a successful conclusion.

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[1] Galabin, *Trans. Obstet. Soc. London*, 1878–79, p. 123.

[2] *Erratum*.—Page 534, line 3, *for* "right" *read* "left."

Numerous instances in which a person is astonished by a result which he has himself produced by unconscious muscular action are recorded in the work on *Mental Physiology* by Dr Carpenter, who was the first to deal systematically with this form of motion. My kyrographic experiments afforded many interesting examples of it; in fact, the great difficulty is to avoid these involuntary muscular movements. Thus, while it is impossible for any length of time to control the mechanical movements of the hand, it is none the less difficult to prevent ourselves from exercising a certain degree of control, especially when our attention has been directed to them. It is to avoid this psychical factor that we are obliged, in examining the mechanical movements, to conduct the experiments upon persons entirely ignorant of the conclusions to which we have previously arrived, and do all in our power to detract attention from the hand during the experiment.

If we wish to see the influence of non-volitional muscular movements, we have only to allow the person to watch the needle, or tell him the nature of the experiment, the result of which will be that we shall obtain tracings, in most instances, exhibiting muscular control and reflex movements, although the subject may honestly endeavour to leave the hand free to the experiment.

Such reflex movements are undoubtedly due in most cases to peripherally initiated stimuli. The needle is seen, heard, or felt to take one direction, and unconsciously the hand is moved in the direction opposite to it, such reflex movements taking place almost invariably during the act of *expiration.* When such movements are due to centrally initiated stimuli, the result is the same. I do not think it possible to distinguish between centrally and peripherally initiated (non-volitional) movements by the examination of the tracing, although it is generally possible to determine the source upon other grounds. The statement that non-volitional movements can be centrally initiated involves two distinct conclusions:—

I. That cerebral modifications can take place of which the ego is unconscious (doctrine of Leibnitz).

II. That the results of such modifications can initiate movements independently of volition.

Both theories, although now very generally accepted, have been the subject of much discussion.

To admit that the mind can arrive at conclusions unconsciously, and that these can set up actions independently of, and perhaps contrary to, the will of the ego, and from this to argue that he is unable to place reliance upon the evidence of his senses, is, unless we place such aberrations within narrow limits, to lessen the individual's moral responsibility, and to deprecate as unsound the initial processes of all reasoning efforts.

Those who have advocated most warmly the theory of unconscious muscular action have neglected to place such limits, and have applied it in explanation of many phenomena to which it is only applicable on the assumption that the subjects are in a peculiar psychological condition during the experiment, although they may be in full possession of their senses immediately after and before it. This arrangement of the facts to suit the explanation is hardly likely to carry conviction to the minds of those who are predisposed towards another hypothesis which appears to them more in accordance with the actual facts.

As the onus of proving that this peculiar psychological condition is present in all experiments is thrown upon those who advocate it, and as the phenomena of non-volitional motion to which it has been applied can be well enough explained without recourse to it, we may, in endeavouring to find the limits within which involuntary muscular contraction operates, consider, that the mental constitution of the subjects engaged differs in no way from that of other mortals.

Since it cannot be conceived that a person can be a passive spectator of the automatic contraction of his own muscles, we may consider that at the moment when he becomes conscious of the progress of a *muscular* action, such action must come within volitional control. That is to say, the moment when the muscular tension gives rise to a distinct impression, the automaticity of the movement terminates.

What we have to determine is, the probable point at which muscular sensation will give rise to a distinct impression. The position of this point will be regulated by the relation of the sensation produced to synchronous impressions in point of number and intensity. In order to reach an approximate conclusion, we may regard the sensation excited by muscular contraction to vary only in direct ratio to the resistance to be overcome. This is not wholly true. Some muscles excite a greater sensation in their contraction than others, while the frictional area in the joints affected has, I believe, some influence in governing the intensity of the impression. But this may fairly be left out of consideration, having very little influence upon the final conclusion. The important factor which regulates the position of the perceptive point of muscular sensation is the condition of the sensorium at the time.

It is very obvious that if the whole attention be directed to a certain group of muscles, only a slight degree of contraction can take place in them without producing a distinct impression.

On the other hand, when the volitional centres are preoccupied by other impressions of great intensity, or the perceptive powers are limited by physiological, pathological, or pharmacological conditions, then a larger amount of muscular effort may take place before a distinct impression is produced.

Thus, while we cannot fix the point of muscular sensation absolutely, we can, by comparing the relations between the amount of exertion used and the estimated condition of the sensorium at the time, arrive at conclusions which, without being precise, will at least place the operation of the psychical factor within some proper limits. But an action may be of compound origin; more than one motor influence may be at work in its production. The ego in this case is less able, by interpreting sensations, to refer the respective movements to their several sources.

He will attribute, in most cases, the whole motion to a single cause. Thus, when both are automatic, the greater source of motion will appear the single cause; when automatic actions are associated with weak central stimuli, he may consider the whole action automatic; but when the volitional effort is preceded by a distinct central impression, and the action resulting is aided by other motor agencies, then the whole action will probably appear volitional. For instance, if I watch the movements communicated to my own chest walls by the act of respiration, I am perfectly assured that these movements are purely involuntary, and are the same in source and character as they were before I commenced to watch them. This is the impression excited at the time; but I know, from other observations, that the very attitude of watching my own chest walls causes a change to take place in their character. The movements are brought partially under mental direction and control, although I am conscious of no direct volitional effort. Again, when I swing my hand by my side, I conclude that the whole motion is produced by the volitional contraction of muscles. I can take no account of the part played in the swinging process by the gravity of the limb itself. I conclude, therefore, that the attempt to determine *the sources of motion* by sensory impressions is very liable to lead to erroneous conclusions.[1] On the other hand, the ego can, on observing motor results requiring for their production *something beyond a limited degree of motor force,* determine by sensation whether such results are produced or not by the contraction of his own muscles.

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[1] We have an illustration of this in the so-called "spirit writing." A pencil is held in contact with a sheet of paper, and very soon spontaneous movements are observed. The person holding the pencil is fully assured that these take place independently of any effort of his own, and is astonished. "What is not *me*, must be something outside of me;" and the spirit hypothesis seems a natural and necessary conclusion. Knowing the nature of the mechanical impulses conveyed to the hand, we should be only astonished if spontaneous movements did *not* occur. But the person has not this advantage: he seeks for evidence of an intelligence in the scrawl produced; and by repeated practices the tracing is made to take the form of words. Now we have the mechanical movements associated with slight muscular movements; but the person refers the whole motion to the source of the first, and being fully convinced that these took place without muscular intervention, he cannot by sensory impressions appreciate that a new set of movements having a different source has been added.

There is a common method of accounting for all kinds of phenomena by saying that they are the result of "*expectant* attention." It is easy to understand that the mind, awaiting an expected impression, may be regarded as preoccupied in reference to sensations not within the field of attention at the time; and, moreover, the attitude may be considered as favourable to the initiation of weak volitional and true automatic movements. But when this "expectant attention" exists in reference to motion, it is difficult to conceive how it can serve to render unimpressionable the ordinary sensations which we associate with motor influences passing from ourselves. In table-turning the "expectancy" is not merely that the table will turn, but that it will turn without muscular effort. We cannot take the sensory activity engendered by the idea as a source of motion, unless we take into account the same condition in appreciating the results of the experiment. Neither can we admit that there is always "a preconceived idea that the table will turn," which Dr Carpenter assumes to be the primary cause of the succeeding phenomena. It is the success of this simple experiment, under the operation of persons who discredit the result, and the wonder excited at the exhibition of so much force *without* the accompanying sensation of muscular effort, that has gained more adherents to the theory of spiritualism than any other thing. That "some other force" than ordinary muscular effort produced the result is a perfectly natural conclusion, and one that has been arrived at after experiment by many who, like myself, did not find either in the spirit or the expectant theory a way out of the difficulty.

Similarly respecting the "body-lifting" experiment (Sir David Brewster's description of which was fully quoted in the last chapter), Dr Carpenter tells us that the success of the prescribed method is due to the "*fixation of the attention*" and the "*conviction of success.*" We are to understand that the mere assertion, that so much weight will appear no weight at all if certain useless proceedings are carried out, made to a man of full intellectual activity (Sir Walter Scott, for instance), is sufficient to deprive him of the sense by which he estimates weight, and, moreover, we must understand that he uses greater muscular effort to overcome a weight which he is thoroughly convinced beforehand does not exist, than he is able to use by the highest effort of the will at other times, and that he does this not only unconsciously, but without experiencing the sensations which always follow such efforts. If I take up a specimen of baryta, and, poising it in my hand, expatiate to a friend upon its exceeding lightness until I have fully convinced him that it must be of specific gravity approaching that of cork, and I then hand it to him, the very difference between the preconceived idea and the actual weight will make the specimen appear heavier than it really is, so that he will probably drop it to the ground, being misled as to the amount of muscular contraction he should have exercised to support it.

We may take another illustration, which will also serve to show the actual gain of power which results from a *certain method of procedure.* A person stands behind a Windsor chair, and places his palms in contact with the anterior surface of the back so as to grasp the lower border with the fingers and the upper with the thumbs. He then lifts it high above his head. He asks others to do the same, but, providing the chair is fairly heavy, they can only raise it a little distance from the floor, and that with great exertion. The trick consists in drawing a long breath before attempting to lift the chair, and retaining it during the effort. When the first operator acquaints the others with the method, they can lift it as easily as himself.

Putting aside, then, the mysterious factor of expectant attention, we see in these experiments an illustration of the mechanical force described in the last chapter, either acting alone or assisting the action of the voluntary muscles.

In all great exertions the epimetric force is called upon to assist the muscles of the arm. Thus, if we watch a porter lifting a heavy box from the ground to his shoulders, we shall observe that immediately before the effort he draws a deep inspiration, and retains the air thus drawn in until its conclusion, when it is expelled, the expiration being most frequently audible. The porter knows nothing of the method of utilizing the epimetric force to assist his voluntary efforts; he is as ignorant of this as he is of the theory of expectant attention. He is probably unaware of the respiratory process which accompanies his exertion; what he does is done automatically and unconsciously, the method being the result of an insensible experience which teaches him how to utilize his strength to the best advantage.

The same thing occurs when a number of men are engaged in simultaneous muscular efforts; insensibly they find it necessary, not only to pull together, but to breathe synchronously, and to make the inspiration isonchronous with the effort. This is accomplished by the sounds, Heave, oh! etc., which generally accompany their exertions. Where absolute silence is enjoined, as in the Royal Navy, I venture to say that the total force exercised by the same number of men will be considerably less than where the work is allowed to be conducted audibly.

Where a *certain method of procedure* is carried out *instinctively,* there is evidence that some natural law or circumstance has caused it to survive other methods, and that it must consequently possess greater advantage.

The force to which I have for convenience attached the name "epimetric" has nothing intangible or mysterious about it. It is the result of a marvellous mechanical arrangement, which has been used in the world's work during all time, and yet without knowledge of the means employed. That a greater advantage may be taken of these conditions, now that we understand how to meet them by an act of the will, is self-evident, and I may mention here one very useful indication for its employment.

Many patients, especially those suffering from spinal irritation or paralysis, will frequently suffer a relapse from being jerked or shaken in the process of removal from the bed. A single attendant very seldom removes a patient safely, while, when two are employed (unless experienced), they are liable to disturb the patient by a want of co-ordination in their movements. Let one attendant place his hands under the shoulders, and another grasp the lower extremities. Then let them both (and the patient also, if well enough) draw a deep inspiration. Now, while the chest is fully expanded, let them lift the patient bodily off the bed and place him on the chair or sofa. The attendants will find their work is accomplished by a single effort, and with very great ease, while the patient will be saved the tediousness and danger of the ordinary method of removal.

ARTICLE V.—*On Hereditary Transmission of Disease. I.—Method of Graphic Representation.* By GEORGE LESLIE, M.B., C.M., Edin.

(*Read before the Medico-Chirurgical Society of Edinburgh, 7th December* 1881.)

WHILE recording cases of mental disease in the capacity of Assistant Physician at the Stirling District Asylum, my attention has been specially directed to the subject of hereditary transmission by the frequency with which the statement that there is "insanity in the family" is made by the friends of patients. With equal frequency and often with perfect truth, the occurrence of insanity in any other member of the patient's family is denied.

In many cases, however, we are led to believe that heredity has been a factor in the causation of the mental disease, even when no insanity can be traced in the family history. In these cases the morbid condition is usually attributed by the friends to some exciting cause of palpable insufficiency, and near relatives of the patient are found to have suffered from diseases not mental but distinctly neurotic. Cerebral apoplexy, chronic hydrocephalus, and other diseases involving the nervous system, are much more common in the families of the insane than in the general population.

This interchangeability of diseases of the same type is well marked in the neuroses, but is also found to obtain in other groups. It gives an additional interest and importance to carefully recorded family histories, as from them we may not only ascertain the morbid heritage of our patients, but they will also throw a side-light on the pathology of the inherited diseases.

The ordinary method of recording hereditary history, which consists of noting the number and relation to the patient of individuals affected with like disease, has many disadvantages. The view which is thus afforded of the family history is at best fragmentary. No idea is gained of the proportion of unaffected to affected persons in the family; the results are inconvenient for purposes of generalization; and the informants, who are usually non-medical, are very prone to omit diseases which do not appear to them to belong to the same type as that from which the patient suffers.

By the use of the "heredity chart," which will be described in this paper, it is hoped that a distinct advance may be made in the direction of scientific precision. From it we may obtain a graphic record of—1. The individuals most nearly related to the patient. 2. The sex of each individual. 3. Their order of birth in their respective families. 4. Their degree of relationship to the patient and to each other. 5. The noteworthy diseases from which they and the patient have suffered. 6. The proportion of affected to unaffected individuals. 7. The genealogical order in which the diseases have appeared in members of the related families.

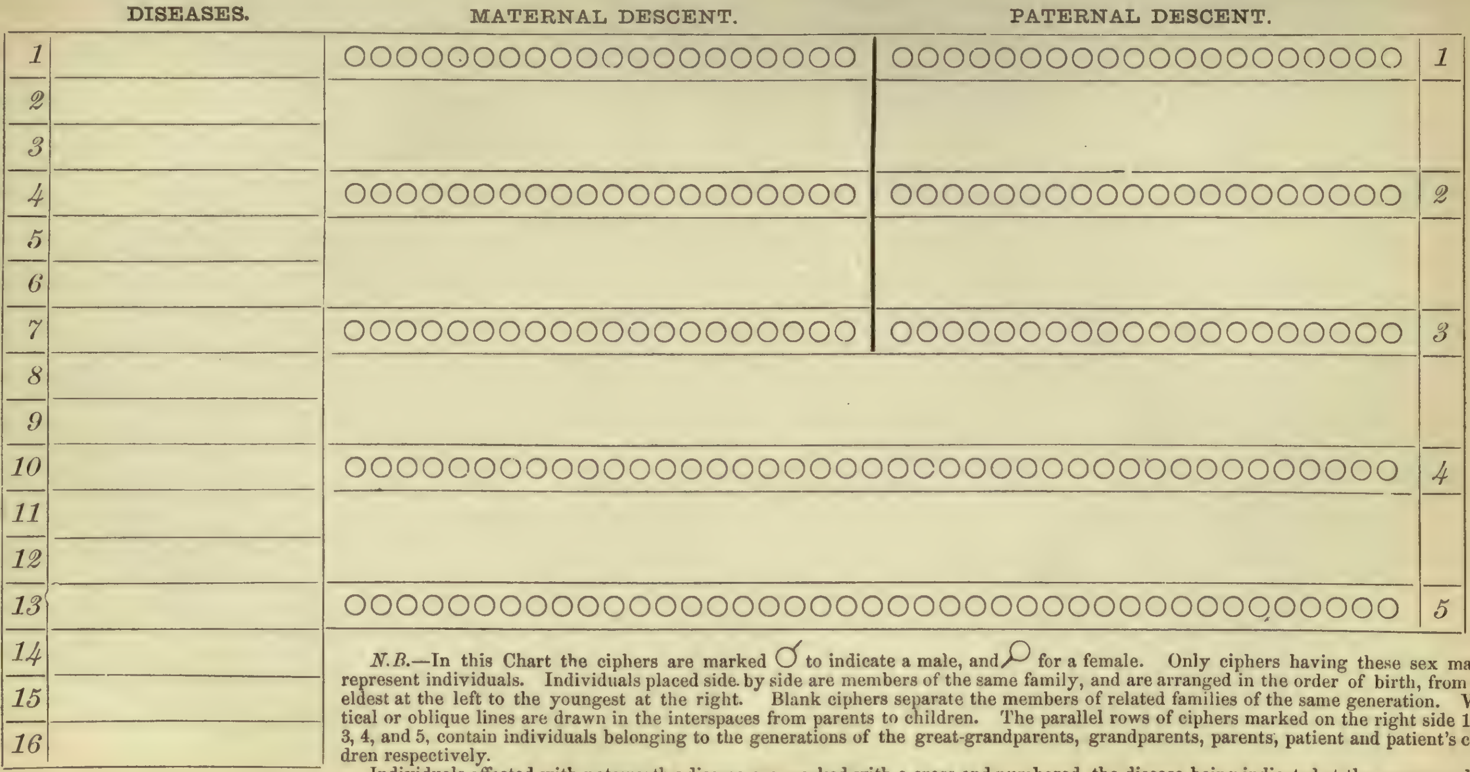
The blank chart, of which a copy is appended to this paper, essentially consists of five horizontal and parallel rows of ciphers. These rows are separated from each other by interspaces of about half an inch, and are numbered on the right side, 1, 2, 3, 4, and 5, from above downwards. The ciphers in the three upper rows are divided by a median vertical line, those on the right side of the line being headed "paternal descent," and those on the left side "maternal descent." At the left side of the chart there is a series of blank lines headed "diseases," and numbered from above downwards. The patient's name, disease, and the date of taking the history are noted opposite their respective headings at the top of the chart. For purposes of convenience a few general directions have been appended to the charts, which have been lithographed and printed for use in the Asylum and for the illustration of this paper.

The ciphers are made to represent individuals when a sex mark is affixed to them. I have adopted arbitrary signs for this purpose, viz., a straight line, the upper part of the cipher for a male, the lower part for a female. These signs, which are seen in the directions and also in the second chart appended to this paper, have been chosen on account of the facility with which they can be written.

In the completed chart only ciphers having these sex marks represent individuals. Individuals placed side by side without any intervening blank cipher are members of the same family, and are arranged in the order of birth, from the eldest at the left to the youngest at the right. Blank ciphers separate the members of related families of the same generation.

In the upper row of ciphers are represented individuals belonging to the generation of the patient's great-grandparents, viz., the great-grandparents, paternal and maternal, and the other members of their

NAME OF PATIENT…………………………………………DISEASE……………………………………DATE……………………



N.B.—In this Chart the ciphers are marked ♂ to indicate a male, and ♀ for a female. Only ciphers having these sex marks represent individuals. Individuals placed side by side are members of the same family, and are arranged in the order of birth, from the eldest at the left to the youngest at the right. Blank ciphers separate the members of related families of the same generation. Vertical or oblique lines are drawn in the interspaces from parents to children. The parallel rows of ciphers marked on the right side 1, 2, 3, 4, and 5, contain individuals belonging to the generations of the great-grandparents, grandparents, parents, patient and patient's children respectively.

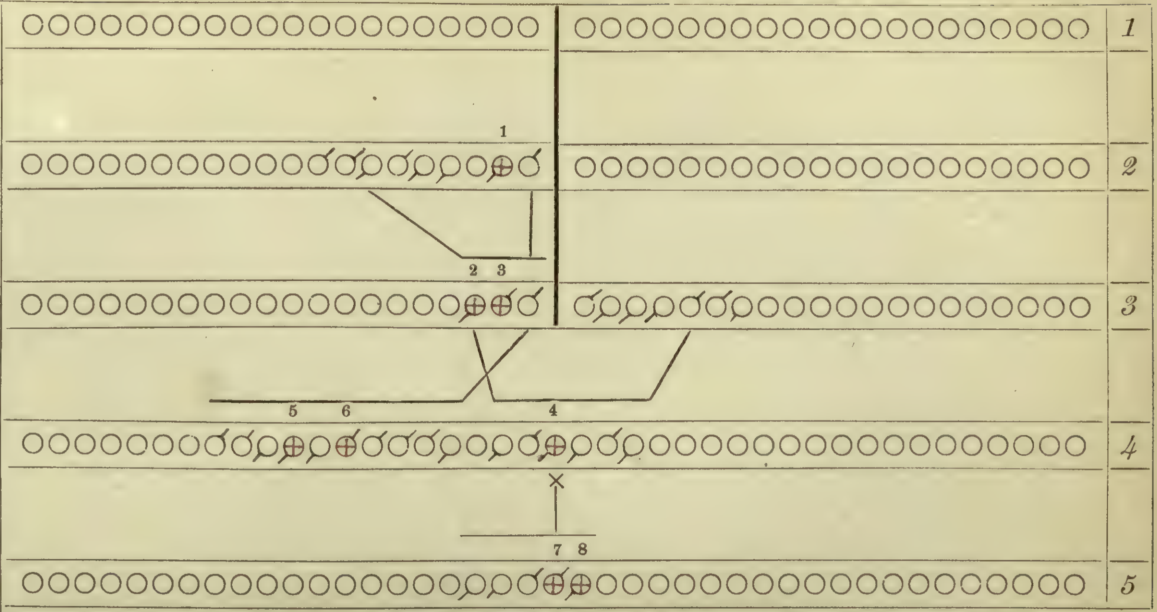
Individuals affected with noteworthy disease are marked with a cross and numbered, the disease being indicated at the corresponding number on the left side of the chart. The mark × is placed below patient.

NAME OF PATIENT, P——— J——— DISEASE, Mania. DATE, 30th Sept. 1881.

DISEASES.

1	*Mania.*
2	*Mania.*
3	*Melancholia.*
4	*Mania.*
5	*Epilepsy.*
6	*Mania.*
7	*Chronic Hydrocephalus.*
8	*Chronic Hydrocephalus.*
9	
10	
11	
12	
13	
14	
15	
16	

MATERNAL DESCENT. PATERNAL DESCENT.



N.B.—In this Chart the ciphers are marked ♂ to indicate a male, and ♀ for a female. Only ciphers having these sex marks represent individuals. Individuals placed side by side are members of the same family, and are arranged in the order of birth, from the eldest at the left to the youngest at the right. Blank ciphers separate the members of related families of the same generation. Vertical or oblique lines are drawn in the interspaces from parents to children. The parallel rows of ciphers marked on the right side 1, 2, 3, 4, and 5, contain individuals belonging to the generations of the great-grandparents, grandparents, parents, patient and patient's children respectively.

Individuals affected with noteworthy disease are marked with a cross and numbered, the disease being indicated at the corresponding number on the left side of the chart. The mark × is placed below patient.

families. Those paternally related are represented on the right, the maternal relatives on the left side of the median line. The second row contains the grandparental relatives arranged in the same way. The third row contains the parental generation, *i.e.*, the parents, uncles, aunts, etc. In the fourth row is represented the family of which the patient is a member, and also families of cousins of the same generation. The fifth row contains the patient's children, and related individuals of the same generation.

The family to which the patient belongs is that first recorded in filling up a chart. The members composing it are represented in their order of birth, and the mark × is placed below the patient's cipher. I usually arrange the patient's family symmetrically under the line which separates the paternal from the maternal relatives. The members of the father's family may be next represented in their order of birth, the cipher to the right of the median vertical line in the third row being used for the oldest member of it. The mother's family is noted in the same row, but on the left side of the vertical line, the cipher next to the line being used for the youngest member. The informant should be asked to enumerate the father's family from the oldest to the youngest, and the mother's in the reverse order. Vertical or oblique lines are then drawn from the ciphers which represent the father and mother to a horizontal line drawn above the ciphers which represent their children (*vide* Chart II.) The degree of relationship of all the members of the three families is thus indicated. The next family to be noted is that of the paternal grandmother in the second row, the cipher to the right of the median line being used for the oldest member. A cipher is left blank between that representing the youngest member of this family and the oldest of the paternal grandfather's family, which is next recorded. The families of the maternal grandfather and grandmother are represented in a corresponding manner at the left side of the median line. Lines are then drawn from the ciphers representing the grandparents to horizontal lines drawn above their families, and the degree of relationship of the individuals of all the families represented is now seen. The great-grandparental generation is then filled in, and again lines are drawn from parents to children. Lastly, the fifth row, containing the patient's children and other related individuals of the same generation, may be filled in and the mutual relationship expressed by lines drawn in the interspaces.

By following the method just described we obtain a graphic record of the existence of the individuals related by blood to the patient. We now inquire into the medical history of each, and, when any are found to have suffered from noteworthy disease, the cipher representing the individual is marked with a cross and numbered, the disease or diseases being indicated opposite the corresponding number on the left side of the chart.

The most remote generation represented is first inquired into, and the disease of most remote individual affected is put opposite No. 1

in the list of diseases; that of the youngest affected member of the most recent generation is the last, so that on glancing down the column the diseases are met in their genealogical sequence. Individuals unaffected by noteworthy disease are only characterized by the sex marks.

The investigation of medical problems being generally most efficiently conducted among hospital patients and other persons usually belonging to the poorer classes, it may be urged that these rarely have records of the great-grandparental and grandparental relatives. In the great majority of hospital patients we can obtain no trustworthy information beyond that referring to three generations, and, therefore, when using the heredity chart, must leave the rows of ciphers in which the more remote relatives would be represented blank. It should be observed, however, that the fault in these cases rests with the common sources of information, and not with this particular method of record.

The second chart appended to this paper may be accepted as a fairly typical example, although more complete histories are often obtained. Only the well-marked neuroses occurring in the family have in this case been recorded. No information was to be had concerning the great-grandparental generation nor of the paternal grandparents. The paternal grandmother was the third member of a family of six individuals, all unaffected by neurosis. The maternal grandfather was the younger of two, the elder being a grand-aunt of the patient, who was a maniac; and as she is the most remote relative found to have suffered from neurosis, her cipher is numbered 1, and her disease placed first on the list. Lines are drawn from the ciphers representing the maternal grandparents to those of the patient's mother's family, which is seen to consist of three members. The patient's mother, who suffered from mania, was the eldest. The second was an uncle, who was melancholic; and the youngest was an uncle, unaffected. On the right side of the median line is represented the family of which the patient's father was a member. It consisted of seven persons, all unaffected, the father being the fifth born. Lines drawn from the father and mother's ciphers are then followed to those of the family to which the patient belongs. It consists of six individuals, of whom the patient, who suffers from mania, is the third. The position of the patient's cipher is indicated by the cross drawn below it. On the same row another family is represented, viz., that of which the patient's younger uncle is father. The fourth and sixth members of it were affected with epilepsy and mania respectively. Lastly, in the fifth row of ciphers the children of the patient are shown, five in number, the fourth and fifth having suffered from chronic hydrocephalus.

I have given an illustration of the use of this method in its simplest form, by which we obtain a graphic record of well-diagnosed disease of a single organic system. In a subsequent paper I propose to give the results gained by the use of the heredity charts in cases where only nervous diseases are considered. In practice, diseases of systems other than that most obviously affected in the patient are often believed to have intimate relation with the patient's state, and are recorded. Bythe use of a more extended code of signs information of a general or strictly physiological kind may be given. A friendly critic has suggested that individuals whose existence is noted, but whose medical history is not ascertained, should be specially distinguished. This may be done by marking the ciphers with negative signs. Facts of twinning, still-birth, and sterility are also of importance, and should be noted by arbitrary marks.

For the loan of papers and for advice kindly given I am indebted to Dr Arthur Mitchell, of the General Board of Lunacy, and to Dr Maclaren, Superintendent of the Stirling District Asylum.

ARTICLE VI.—*Treatment of Lacerations of the Cervix Uteri.* By SKENE KEITH, M.B.

TRACHELORHAPHY, or repair of lacerations of the cervix uteri, is perhaps the most common gynecological operation at the present time in the United States of America. The great frequency of this operation in the States cannot, I fear, be due, at least entirely, to the better practice of European obstetricians, as not a few of the cases I have seen operated on in the Women's Hospital of New York have dated the commencement of their trouble to a labour occurring in the Old World.

Lacerations of the cervix uteri appear to cause two distinct sets of symptoms,—those caused simply by the tear, and those by the pressure of a mass of hard cicatricial tissue in the angles. There appears to be more of this dense tissue present when slight or no attempts have been made to keep the parts clean after delivery. The first condition gives rise to subinvolution and a hyperæmic condition of the uterus, with their attending evils; the second to reflex nervous symptoms. This latter condition Dr Emmet has, I think, proved by cases from which he removed cicatricial masses of tissue, but failed to get union. In such a case the nervous symptoms disappeared, although the size of the uterus was not reduced in the least degree. But when good union is obtained, the uterus, from having been four or even five inches at the time of operation, may be of normal size when the sutures are taken out ten days afterwards.

By the kindness of Dr T. A. Emmet, the originator of this operation, of the surgeons of the Women's Hospital, and of others, I have had many opportunities of seeing trachelorhaphy performed during the last three months. The object of the operation is, of course, to put the cervix in as good a condition as it was in before the labour which caused the tear, and thus to cure the troubles which a laceration so often gives rise to.

All agree that preparatory treatment is necessary in every case where there is any cellulitis, and that this condition must be cured before any operation can be performed, except in some rare cases in which treatment seems to have the effect of reducing, but not of curing the inflammation.

Dr Emmet's preparatory treatment consists in curing the cellulitis which is so often present by the administration of vaginal douches of hot water once or twice a day, by applying iodine behind and all round the cervix twice a week, by supporting the uterus from the vagina by cotton pads soaked in glycerine, and so relieving the traction on the uterine ligaments and at the same time reducing the size of the cervix. The general health of the patient must be carefully attended to; she must be warmly dressed, and must take exercise, except during her monthly periods. The mucous follicles in the cervix are often enlarged, sometimes closed, and so distended by their secretion as to form small cysts. These must be carefully punctured and the contents evacuated, and this treatment alone will often reduce the cervix by one-half, and also allows the lips to roll in. By this treatment symptoms caused by the laceration will in some cases disappear, but in most, if nothing further were done, the patient would in two or three months be in as bad a plight as she was in before.

After the general health and the condition of the cervix have been improved, Dr Emmet proceeds to operate. A short time before the operation is begun, the patient is given an injection of hot water to contract the bloodvessels. Ether is administered, a Sims speculum introduced, and, after a sound has been passed into the uterus to see the exact position for the cervical canal, the lower or left side of both lips is pared by picking up the tissue with a tenaculum and removing it with curved scissors. Any cicatricial tissue in the angles is most carefully dissected out, for Dr Emmet believes that it acts exactly like a foreign body. This cicatricial tissue is found in greatest abundance next to the cervical canal, probably because the discharges from the uterus after delivery cause this side to heal more slowly. The upper or right side is then freshened in the same way. As thin a slice of tissue is removed as possible, except in those cases where there is much hypertrophied tissue, which has to be removed to allow the lips to come together. The central part of each lip is left undenuded, larger than natural, and wider towards the external os, as it is that end which gets most reduced in size after the operation.

The hæmorrhage is usually very slight unless the circular artery be cut; but the bleeding from it can be easily arrested by passing a suture deeply in the tissues below the artery, and thus exerting pressure. This is better and certainly much more easy than applying a ligature to the vessel itself, as the tissue in which it runs is very dense. Any oozing can be stopped by the pressure of the sutures, or a little hot water will easily arrest it. Dr Emmet uses silver wires for sutures, and puts in from six to eight to the inch. The first one is put in deeply below the angle on the upper side, at right angles to the cervical canal, and the ends are then held by the nurse, who holds the speculum, and thus the cervix is steadied while the others are passed. The two sutures on either side of the os externum are put in at right angles to the others, and serve to roll in the lips and prevent any gaping at the crown. After all the sutures have been introduced they are twisted up and carefully bent along the cervix, so that the ends may not injure the vagina, and are then cut short. The after-treatment consists in daily injections of hot water after the second day. The bowels are allowed to move regularly, and the sutures are removed in a week or ten days.

With the exception of Professor A. J. C. Skene, all the operators I have seen follow Dr Emmet very closely in both his operative measures and in his after-treatment. The differences in Dr Skene's way of getting to the same end may at first sight appear trifling, but in reality make the operation considerably more easy to perform. Dr Skene does not give a vaginal injection before operating, and does not give ether unless the patient be very nervous, the tear a very extensive one, or the parts unusually tender. After introducing Sims's speculum he fixes on to each lip a pair of double-curved tenacula, so as to be able to move either lip in any direction, whilst with a pair of scissors, which he has named hawk-bill from their very evident resemblance, he cuts out with one snip first the lower and then the upper angle; and then, as it is usually necessary to denude a larger surface, he does it with Emmet's scissors. Some might suppose that the action of the hawk-bill scissors was too mechanical; but this is not so, as the lips of the cervix are held in exact position for the scissors by the curved tenacula.

Silk sutures are used instead of wire, and allow of lancet-pointed needles being used. The silk is rendered aseptic and incapable of absorbing any serum or other fluid by being soaked in a mixture of carbolic and salicylic acids and wax. I have seen a suture prepared in this way which had been left in a cervix for over fourteen months and had done no harm, although the woman had become pregnant and been delivered while it remained in position. The silk sutures can be easily tied by Skene's suture-adjusters, their great advantage being that they do not obstruct the light as the fingers would, and allow of the edges being brought accurately together. After the sutures have been all tied, a tampon of marine lint is put into the vagina; this keeps the cervix steady by acting as an external splint, just as the silver wire acts as an internal one. The tampon also takes up all serum, and prevents it from becoming putrid. It is removed in forty-eight hours, and is not renewed, nor are any vaginal washes injected unless any suppuration—an exceeding rare occurrence—should take place.

I have had opportunities of comparing Dr Emmet's and Dr Skene's results, and there is nothing to choose between them. Dr Skene kindly allowed me to operate on one of his patients; and I am sure that any one who has not Dr Emmet's marvellous skill in operating about the uterus or vagina, nor has become wedded to his ways, will appreciate Dr Skene's improvements, as I think, in performing this very useful operation.

ARTICLE VII.—*Diseases which Involve the Organ of Hearing.* By P. M'BRIDE, M.D., F.R.C.P.E.

(*Continued from page* 704.)

PART II.—OTHER PATHOLOGICAL CONDITIONS LIABLE TO PRODUCE SECONDARY EAR DISEASE.

Gout and Rheumatism.—Toynbee ascribed the presence of exostoses in the meatus in many cases to a rheumatic or gouty diathesis. Our modern text-books, with the exception of those of Gruber and Macnaughton Jones, do not seem to indorse this view. At the last International Congress, however, Dr Urban Pritchard stated his belief in the arthritic diathesis as a cause of aural exostoses. One of Dr Pritchard's arguments was founded on the fact that in his practice this form of ear-disease was much more frequent among the better classes than in hospital patients. Garrod, as is well known, has described deposits of urate of soda crystals occurring in the auricles of gouty persons. These are most common in the upper part of the helix.

According to Hinton, "there is no form in which a gouty affection of the ear is so clearly marked as in a peculiar obstinate irritability of the meatus, attended with slight serous or sticky discharge, with itching and pricking pain, the walls being somewhat swollen, with a tendency to purple in their redness. In these cases the membrane also is congested, but the structures of the tympanum may apparently scarcely be involved." This condition also obstinately resists treatment by local remedies alone.

Anchylosis of the stapes in the fenestra ovalis is said by Toynbee to be most common in those who have a tendency to gout or rheumatism. Dr Buckler, in a work published in 1853, refers to the occurrence of anchylosis between the ossicles in rheumatism. Unfortunately, I have been unable to obtain his treatise, and cannot, therefore, tell on what data this statement is founded. That those diseases which attack joints elsewhere are likely at times to involve those of the ossicles seems in the highest degree probable—more probable, indeed, than is admitted by modern writers on otology.

Toynbee observed a very peculiar group of ear symptoms which he traced to gout. A feeling of vacancy in the ear, and humming tinnitus, temporarily relieved by plugging the meatus, were complained of. A cure was effected by local depletion (leeches), restricted diet, and small doses of colchicum.—(*Ref.*, Toynbee, *Diseases of the Ear*, pp. 108, 281, 362; Gruber, *Lehrbuch der Ohrenheilkunde*, p. 413; Macnaughton Jones, *Aural Surgery*, pp. 17, 18; Flint, *Practice of Medicine*, p. 1029; Hinton, *Questions of Aural Surgery*, pp. 67, 93.)

Syphilis.—(1.) The auricle is, according to Burnett, sometimes attacked by a tubercular eruption a year or more after infection.

(2.) *Affections of the Meatus.*—Hinton, Schwartze, and other authors have noticed the occurrence of syphilitic ulcerations in the external auditory meatus. The ulcers are annular, with a dirty white base and swollen edges, which encroach upon the lumen of the canal. The neighbouring lymphatics, too, are much swollen. Von Troeltsch describes a painful form of otorrhœa which is caused and kept up by the presence of condylomata. Similar cases have also been described by Buck.

Lacharrière has observed a form of acute syphilitic otitis externa which he considers pathognomonic. The walls of the meatus are swollen, but not so much as in the phlegmonous form; the skin is cracked and red; while the discharge is very offensive. Both canals are usually attacked simultaneously. I have seen a case which corresponded to this description in all points but one, viz., the offensive discharge. Both canals were also attacked, but the secretion had no disagreeable odour.

(3.) *The Middle Ear.*—Von Troeltsch states that acute catarrh of the middle ear often sets in very suddenly in syphilitic patients. Roosa is of opinion that syphilis produces a tendency to proliferation of tissue in the tympanum, and agrees with Schwartze that this is primarily due to a periostitis.

My own experience would lead me to believe that a form of ear-disease similar in most respects to what is variously described by authors as sclerosis of the tympanic mucous membrane, dry catarrh, otitis media hypertrophica, etc., is often met with in syphilitic patients. It differs, however, from ordinary cases of this affection in the more rapid advent and increase of deafness. I do not mean to say that this form of ear-disease is pathognomonic, but only that it may often be observed in those who have been infected, and is then probably due to the syphilitic taint.

Occasionally ulcers in the pharynx lead to closure of the Eustachian tubes. The latter, too, are often obstructed by catarrhal swelling of their lining membrane in the course of syphilis.

(4.) *The Internal Ear and Auditory Nerve.*—Hinton believed that deafness from lesion of the terminal portion of the auditory nerve often arises at the age of puberty in those affected with hereditary syphilis. The deafness is very great, greater than in tympanic disease, and the tuning-fork is not heard by bone conduction. There is in these cases no characteristic appearance of the drum membrane.

Knapp of New York has lately observed several cases of heredito-syphilitic ear-disease, in which there seemed to be a combination of middle ear catarrh and labyrinthine mischief. Knapp's paper is also interesting from the number of references it contains to literature bearing upon the subject treated of.

Roosa is of opinion that there are no symptoms pathognomonic of affections of the labyrinth due to syphilis, and that there is good reason for believing that periostitis and gummata occur in the internal ear, besides lesions affecting the trunk of the portio mollis.

Gruber, in the post-mortem examination of a case of deafness supposed to be due to syphilitic disease of the labyrinth, found the latter congested and thickened, and its fluid contents tinged with blood. Unfortunately, the patient died of typhus fever, and it seems not impossible that the congestion was in some way associated with this, although deafness had previously existed. —(*Ref.*, Burnett, *Diseases of the Ear*, pp. 271, 333; Hinton, *Quest. of Aural Surgery*, pp. 96, 291; Von Troeltsch, *Lehrbuch der Ohrenheilkunde*, pp. 114, 265; Buck, *Diagnosis and Treatment of Ear Disease*, p. 104; Roosa, *Diseases of the Ear*, pp. 288, 504; Gruber, *Lehrbuch der Ohrenheilkunde*, p. 617; Knapp, *American Journal of Otology*, ix. p. 146.)

Tuberculosis.—That the petrous portion of the temporal bone is liable to be attacked is shown by observations recorded by Zanfal and Schwartze; but whether there ever occurs in the human subject a true tuberculosis of the tympanic cavity remains to be proved.

This lesion has, however, been described by Schütz as occurring in the pig. He found that in this animal the disease begins as a pharyngeal catarrh, which is soon followed by cheesy degeneration of the gland structures, and finally spreads to the tympanum. In man Schwartze has seen, both on the mucous membrane of the tympanum and on the drumhead, gray nodules which presented the naked-eye appearance of tubercle; but no opportunity of microscopic examination was afforded.

Suppuration of the tympanum in phthisical patients often runs its course without pain, and is characterized by the rapid destruction of tissue which it produces and the obstinacy with which it resists treatment. Von Troeltsch has observed the occurrence of such an otorrhœa in tubercular patients before any evidence of a constitutional taint could be found in the lungs.

Buck describes a form of tympanic inflammation which he has observed in one or two cases of phthisis. Its clinical features seem to be the presence of a solid white mass behind the drum membrane. Buck designates it cheesy inflammation.

Hinton has also noticed that the ear participates in phthisis. One condition mentioned by this author I have not seen described elsewhere, namely, a loss of function of the auditory nerve, without any changes in the middle ear.

Von Troeltsch considers it possible that tuberculosis may have its origin in an otorrhœa through masses of pus becoming hardened in the tympanum or mastoid cells, and then undergoing cheesy degeneration.—(*Ref.*, Von Troeltsch, *Lehrbuch der Ohrenheilkunde*, pp. 459, 460, 461; Schwartze, *Path. Anatom. des Ohres*, pp. 69, 99; Burnett, *On the Ear*, p. 448; Hinton, *Quest. of Aural Surgery*, pp. 67, 276; Buck, *Diagnosis and Treatment of Ear Disease*, pp. 244, 245.)

Leukœmia.—Gottstein has recorded two cases where, in the course of this affection, deafness came on suddenly, was bilateral (in one there was an interval of a few days between the two sides), and absolute; vertigo was also marked. Both cases ended fatally, but no post-mortem examination was allowed. The question, therefore, remained unsolved as to whether the pathological cause lay in the labyrinth, auditory nerve trunk, or its centre. Of its hæmorrhagic nature, arguing from analogy (hæmorrhages in the retina and from the mucous membranes being common in this disease), little doubt could be entertained.—(*American Journal of Otology*, vol. ix. pp. 267, 268.)

Bright's Disease.—In this disease, as is well known, hæmorrhages are found in the retina. Occasionally the ear is affected in the same way. The tympanum becomes filled with blood, which probably either becomes absorbed or leads to suppuration. Schwartze was the first to describe this condition. In a case reported by him, a dark red colour was communicated to the membrane by the blood contained in the tympanum, so that the diagnosis was easy.

I am not aware that sudden labyrinthine deafness in the course of Bright's disease has been described, but it seems probable that such a contingency might be looked for here, and also in pernicious anæmia, in which retinitis hæmorrhagica is not uncommon.—(*Ref.*, Roosa, *Diseases of the Ear*, pp. 256, 257.)

Intra-Cranial Tumours.—These occasionally cause deafness by exerting pressure on the auditory nerve, and probably more rarely by affecting its centre. I shall here translate an observation by Schwartze which seems to be of very great clinical importance. This author says, "In cases of cerebellar tumour, bilateral deafness is not uncommon, the symptom being first observed on the side corresponding to the tumour. Bilateral deafness occurs in cases where direct pressure of the tumour upon the auditory nerve of the opposite side, or its nucleus in the medulla, is out of the question, and where there are no symptoms of paralysis of other nerves on that side. In such cases there may perhaps be neuritis of the terminal parts of the nerve in the labyrinth, or there may be simply functional disturbance from œdema."

Basilar Aneurism, in addition to causing distressing tinnitus, is especially apt to cause deafness by pressure on the auditory nerve, as pointed out by Gull and Sutton.—(Von Troeltsch, p. 536; Schwartze, *Path. Anat. des Ohres*, p. 131.)

Reflex Pain in the Ear.—(*a.*) Gerhardt has stated that ulceration of the epiglottis is constantly accompanied by pain referred to the ear. Woakes considers it wrong to limit this remark to ulceration of the epiglottis, as any laryngeal irritation may produce earache, provided it be sufficiently severe in its effects upon the superior laryngeal nerve.

According to Woakes, such an irritation is conveyed through the vaso-motor elements of the nerve in question to the superior cervical ganglion, "thence the impression will be transferred through the nervi molles to the middle meningeal artery, one of the nutrient arteries of the middle ear, as a dilating influence. The results are congestion, possibly ending in chronic inflammation." — (Von Troeltsch, *Lehrbuch der Ohrenheilkunde,* p. 568; Woakes, *Deafness, Giddiness, etc.*, p. 37.)

(*b.*) A very common cause of earache is to be found in the presence of carious teeth, which produce a reflex aural neuralgia. While not denying that neuralgic pain in the ear may be due to malarial poison or other causes, yet, in a climate such as ours, earache, without the presence of inflammation in the meatus or middle ear, and unaccompanied by throat symptoms, will generally be found to owe its origin to this cause. Very often, in these cases, we have a history of toothache, but the latter symptom may be no longer noticed. Generally the pain is strictly localized in the depths of the ear at first; frequently, however, it spreads, and attacks not only the whole area supplied by the fifth nerve, but also the occipital or mammary regions.

The physiology of this reflex pain is of considerable interest, for we must obviously assume a transference of irritation from the dental nerves, not only in the Gasserian ganglion, but in the higher centres, to account for parts being involved which owe their supply to spinal nerves.

Nervous Debility.—There is a condition which, although it does not often require medical treatment, is familiar to every one. I allude to the want of energy or feeling of lassitude which most persons have experienced, and which I think a little reflection will show to be due to want of nerve-force, or, to use an everyday expression, an atonic state. While it lasts, the same body and the same muscles are less capable of fulfilling their functions, owing to some transient state of the nerve-centres and nerves. In this functional impairment the auditory nerve in all probability shares, and hearing becomes less acute.

A slight diminution of hearing power is not noticed by a healthy ear; but where the function is already much below par owing to pathological conditions, a slight change for the worse makes itself disagreeably felt, and is readily noticed. The views here advanced are more fully discussed in an article on "Nervous Deafness," *Lancet*, 1881.[1]

ARTICLE VIII.—*Valedictory Address delivered before the Medico-Chirurgical Society of Edinburgh, 18th January* 1882. By PATRICK HERON WATSON, M.D., F.R.S.E., F.R.C.S.E., Surgeon to Chalmers Hospital, Extra Acting Surgeon to the Royal Infirmary, Lecturer on Surgery, Edinburgh.

GENTLEMEN,—It is hardly possible, at any point in our progress from year to year which implies the completion of an epoch in our history, to avoid retrospection; nor, perhaps, is it undesirable that such occasions should be made useful with the view of ascertaining the gain in knowledge as balancing the lapse of time.

The biennial election of your President affords him a reasonable excuse, before leaving the chair in which your generous confidence has placed him, to take a bird's-eye view on your behalf of the work over which he has had the good fortune to preside. This retrospective address has, with some reason, taken the place of an address on first presiding over your meetings. In availing myself of this privilege, and looking back over the too rapidly sped past of a two years' period, the most outstanding fact I have to chronicle is the sad losses we have sustained in the removal from among us of our late President, Dr Sanders, of Dr Wood, Dr Sharpey, Dr Omond, and Dr Handyside. It can hardly fail to be within your recollection the earnest address which only two years ago you heard from Dr Sanders's lips. You cannot forget how fully, in it, he justified the claim of biological science to be the source from which advance in scientific medicine might most reasonably be anticipated, and upon the more perfect knowledge of which all practical improvement in our profession might be said to wait. We little anticipated then that so soon we should see his face no more, that in the ensuing autumn, when only just returned from the pleasant relaxation of a well-earned holiday, he should be struck down by a form of disease upon the elucidation of which he had bestowed some of his freshest energies, and that ere the winter was past his place amongst us should be vacant. As one possessed of a great simplicity and guilelessness of character, as an honest and true worker, who was less inclined to take credit to himself than to do justice to others, as a suggestive thinker, a well-informed writer, a ready but infrequent speaker, he may well dwell in our memories as an example and a guide.

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[1] The reader may have noticed that in this paper all mention of otharmatoma, or insane ear, has been omitted. I have not discussed this subject, as its full consideration would carry us beyond the proper limits of this paper.

The sudden and unexpected death of Dr Andrew Wood, under circumstances so little anticipated, not unnaturally created a sense of consternation in many minds. He still filled so large a place in the councils of the College of which he was a prominent member, that few had thought how many years had come and gone since he first entered the profession, and how much more he was full of years than his mental activity in college matters and in medical politics would seem to show. Though in recent times he had not often taken a part in the meetings of this Society, there was a period in its history when he bore his own share in its debates and actively interested himself in its proceedings. Apparently the attractions of imperial politics, to which constitutionally he was addicted, came in the way of more purely professional matters of interest at the middle period of his career, just as for twenty years past the Medical Act and the politics connected with the mutual actions and reactions of licensing bodies and universities afforded a scope for the line of thought which was both to him most easy and most congenial, and led him to lend himself heart and soul to questions which to the great mass of medical men seem unprofitable and distracting.

Another loss from the number of our Honorary Fellows deserves more than a passing record. Dr Sharpey's honoured name had long been connected with the Ordinary Fellows of the Society—since, in fact, the time that he resided in Edinburgh and made a reputation which, though wider-reaching in its sphere when secretary of the Royal Society, was quite as brilliant in the field of science while he was still an ornament of this medical school. In the end of 1879 the Council received the intelligence that Dr Sharpey desired to retire from the list of ordinary members, and anxiously considered upon what ground they were to recommend the application, which seemed to break a connexion of half a century's existence, fraught with so much reflected glory to the history of the Society. It was with quite a sense of relief that your Council learned that the retirement was in connexion with a proposal about to be mooted for the elevation of Dr Sharpey to the list of honorary members, and which technically required that his name should not be in the list of ordinary members. At the ensuing meeting for the election of honorary, foreign, and corresponding members, I need not remind you, this tardy act of just recognition of most brilliant talents and sturdy diligence was passed; but, alas! before the recipient of your gracious acknowledgment could be informed of your choice, the ruthless hand of Time had effaced him from the ranks of living workers in the field of science, and left alone such inscriptions of the legitimate esteem of his fellow-workers and admirers as you had but recently done your most to make indelible, to prove that his labours in anatomical and biological science were neither underestimated nor forgotten in the city and school of his early professional labours.

In another name, that of Dr Omond, has more recently been sounded out the knell of departed worth, once a president in this Society, and worthily holding his place along with the honoured names of Alison, Christison, Syme, Begbie, and others who had preceded him. Showing no want of professional attainment nor deficient interest in any department of medical or surgical learning, he was possessed in an eminent degree of great mathematical powers, unequalled skill in the game of chess, business habits of remarkable calibre, a devotion to all the projects for the amelioration of the condition of the poor and destitute, from first to last an enthusiastic and wise office-bearer of the Medical Missionary Society of this city. We must all deplore his loss as a much-loved man among the members of his own profession.

Another former president has been taken away from amongst us during the past session—one who, full of years, had comparatively at a late period of life been elected to the honourable distinction of occupying this chair. If the honour were a deferred one, due to causes accidental rather than personal, no man was more worthy of such a distinction than Dr Handyside, as possessing for a great part of a lifetime a European reputation as an anatomist and a surgeon. He studied his profession in the second decade of the century, under circumstances most favourable to the cultivation of the scientific side of his medical education; and after a period of extended continental residence in Germany as well as France, he returned to his native city, where, as a scientific teacher of anatomy, as an erudite student, and as a great practical surgeon, he made for himself a reputation and gained for himself friends which should have secured for him almost any position he might have selected, whether as a practitioner or as a teacher, had only health been granted him. After a period of comparative retirement both from teaching and practice, when Professor Struthers of Aberdeen left the school attached to the College of Surgeons in consequence of his appointment to the anatomical chair in the great northern university, Dr Handyside again came forward as a teacher of his favourite science, and by a continued service of years of growing success as a teacher proved incontestably how little the active energy of former days had been diminished, and how constantly he had kept himself *au courant* with the literature of his favourite study. He was essentially an advanced scientist in anatomy, biology, and surgery in the earlier years of professional life, and the same ring of the scientific side of anatomy was characteristic of his teaching to its close. I believe he might lay more claim than most other men of this school to being learned and erudite in his profession. He had a great library, with the contents of which he was intimate, and there was hardly any subject connected with medicine upon which he could not give valuable information and afford correct references. He was a man of the most punctilious honour, and, while claiming little for himself, was ever ready to interpose in behalf of the credit and reputation of a colleague in the matter of priority of discovery or invention. In the earlier years of his connexion with this Society he had been a laborious member, and when he occupied the chair he was indefatigable in his efforts to elicit materials for meetings and discussion. He was always most anxious to render the influence he might be able to exercise in the Society available towards the closer social intimacy of its members with each other and with himself, and we cannot fail to remember the great social gathering he inaugurated during his presidentship, at which new inventions in surgery, medicine, and physiology were shown, together with the most modern achievements in the mounting of preparations and in microscopic demonstrations; nor can we refrain from mentioning the *Jubilee Chronicon* which he read from this chair. Dr Handyside's reputation, so far as he himself was interested in its being perpetuated, will, I believe, be most permanently connected with the establishment of medical missions. The medical missionary dispensaries of this city, together with the inauguration of like institutions in other towns, will ever continue as monuments to his unselfish and unwearied labours.

Turning from these regretful memories of the past, let us consider the sum total of the work which has occupied the diets of the Society during the past biennial period. To our impromptu contributions I shall first turn, not only because they first engage our attention at each meeting, but because, I acknowledge, I look upon them with a degree of interest which their fresh character, their unpremeditated form, and the material with which they deal has always seemed to me to invest them. No doubt from time to time they have been objected to as intruding themselves upon the more formal and advertised business of the Society. Papers appear in the billets; they attract a special auditory interested in their subjects or in their author; and those who come to the meeting are occasionally disappointed because the paper never comes on, all the evening having been consumed in the exhibition of pathological and other specimens. To obviate such difficulties it was at one time attempted to separate the pathological from the other meetings, every second or third meeting being dedicated to the exhibition of such specimens. This did not, however, prove so successful, when practically tested, as might have been hoped, and evenings occurred again and again when there were no specimens or no auditors, or but little of both, or sometimes even an overflowing collection of specimens and no one to show them to. I recollect on more nights than one, when this plan was adopted, that a specimenless meeting was eked out by medical news, with remarks of a desultory character. Of recent years the divorcement of the written communications from the pathological and other less formal statements has been annulled, and during the two last years they have run on *pari passu* without occasioning any injustice to the written papers, and without any undue repression of the specimens, which I believe I am correct in saying have formed an important and interesting element in both sessions. I dare say an event of a few sessions ago with reference to pathological specimens may not be forgotten by the Society. There had been a more than usual number of these exhibited on some occasion, when the first paper was reached only at a somewhat late hour in the evening, while other communications had to be postponed. In the first issue after the meeting of a metropolitan medical journal, allusion in a sneering tone was made to this fact by their Edinburgh correspondent, who spoke of members of the Society competing in the exhibition of their museums, which, if interesting in themselves, might be reserved to a convenient season rather than interfere with the regular business of the evening. So tender and sensitive, evidently, were the feelings of those members who did show specimens, that, certainly during the remaining evenings of that session, no pathological specimens were shown, and I think I may say with some truth that this department of the Society's stated business has never again regained the same degree of active vitality which it showed before this biting blast was emitted by the unknown correspondent of the southern luminary. Recent specimens, whether anatomical or pathological, have an interest certain to be accepted only if displayed in such a manner as when handed from one to another to tell their own story, without requiring manipulation. To deprive the Society of the opportunity of seeing such specimens in as recent a condition as may be possible, as the relegation of them to special pathological evenings would imply, would certainly detract from their interest and significance. Patients, too, who are only available for exhibition and examination at uncertain periods, must either be shown at the first ordinary meeting, or the Society must be deprived of an opportunity of seeing what is unique which may never occur again in a lifetime. I confess I regard these exhibitions as adding to our ordinary gatherings much the same lively interest which one finds in a clinical lecture, properly so-called, as contrasted with a systematic lecture, with which the reading of the regular papers may be more reasonably compared.

The exhibits during the past two sessions amount to 119 specimens, classified as follows:—

Patients, ...	19
Anatomical and morphological specimens, . .	6
Microscopic specimens, photographs, casts, and drawings	14
Chemical preparations, medicinal agents, and poisons, .	2
Instruments and mechanical contrivances, . .	2

Graphic delineations, ...	4
Pathological specimens, ...	72

To recapitulate at length the interesting *viva voce* details which afforded a lively commentary upon all these specimens would be out of the question, as it would really in effect be nothing else than re-reading the minutes to which you have already set your seal. A brief *résumé* of the special features of interest in each class may, however, recall some of the details which occupied the successive meetings, and revive while it recalls the interest you displayed in this part of our programme.

The first specimen to which I may recall your attention is the one of *ichthyosis hystrix, verrucosa*, or *cornuta*, shown first in this Society in May (5th) 1880 by Professor Sanders as the same case exhibited before the Clinical Society of London (by Dr Crocker) in 1879, when under Dr Tilbury Fox's care, and described in the *Lancet* (10th May, 1879) and *British Medical Journal* (24th May 1879). This same patient was shown again by Professor Grainger Stewart on the 5th January 1881 to illustrate the beneficial effects obtained by chrysophanic acid treatment.

Another interesting and rare cutaneous affection, *molluscum fibrosum*, was brought under the notice of the Society, at the meet-of 7th January 1880, by our most energetic and painstaking treasurer, Mr Joseph Bell, when we had the advantage of a critical memoir on the disease by our skilled specialist in dermatology, Dr Allan Jamieson.

Dr Cadell's interesting example (3rd March 1880) of a primary syphilitic sore contracted by a mother from her daughter, who had been confined, and who was at the time covered with an eruptive syphilitic affection, afforded matter for regret in so far only as the history in this case did not go back one stage further, as respected the condition of the infant and the condition and antecedents of the reputed father of the child.

The remarkable and characteristic case of myxœdema in a man of fifty (5th January 1881), following in the course of a rheumatic fever, and in which, in addition to his heavy expression, his swollen skin, spade-like hands, dragging gait, slumbrous speech, and sense of numbness all over the body, there were lumbar pain on movement, stertorous breathing, slavering lips, and defluvium capillitii, weakness and slowness in walking, almost amounting to incoördination, diminished reflex movements, and abolition of "tendon reflex," but without appreciable loss of sensibility, formed an exhibit of special interest.

On the 1st December 1880 Dr James Ritchie, instead of Professor Grainger Stewart, showed a very remarkable case of *hemiatrophia facialis* in the person of a German, æt. 42, whom Professor Gairdner of Glasgow, who was present, explained was the identical case described by Romberg in 1847, and stated that he had made an exhaustive comparative survey of the case, founded on Romberg's data, while he had obtained a good illustrative photograph of the case, as well as a cast of the palate.

At the same meeting (1st December 1880) Dr Brakenridge showed in the person of a girl æt. 19 a peculiar and interesting cataleptic condition of the right forearm and hand, persisting for 9½ months, to which he appended a verbal statement replete with interest in a clinical point of view as bearing upon the differential diagnosis of these cases, and in which his characteristic analytical and penetrative power was most markedly developed.

On the 21st March 1881 Dr Grainger Stewart showed a patient in whom the condition of exaggerated tendon reflex was well marked. The case was one of brain lesion with secondary degeneration, and illustrated well the conditions which constituted the essentials of the mechanism of this symptom.

On the 7th July 1880, and again on the 2nd March 1881, Dr Grainger Stewart showed an interesting case in which patches of spontaneous ecchymosis, due to subcutaneous hæmorrhage, and confined to the eyelids, and in which defluvium capillitii, chronic laryngitis, a feeble heart, and general muscular weakness occurred as complications.

On the 1st December 1880 Dr Brakenridge showed a most curious phenomenon in a case of aneurism of the arch of the aorta, which, while it arrested the palpable pulse in the primitive carotids and brachials, was not attended by any evidence of want of blood in the head and neck or upper extremities.

The patients illustrative of surgical conditions which were exhibited to the Society were eight in number.

First, there was Mr Joseph Bell's case of stellate fracture of the patella (7th April 1880) occurring in a boy æt. 12, where with antiseptic treatment the joint was freely opened, washed out, and drained, and where not only had the fracture united soundly, but the normal conditions of the joint were restored as regards mobility.

Upon the 4th February 1880 Dr Cadell showed a little girl who had two years before suffered from suppuration of the ankle-joint, and where the local conditions were so threatening that amputation of the foot was advised. The abscess was opened without antiseptics, which were not employed throughout. The recovery was complete, with just a trace of stiffness.

At our meeting of the 2nd March 1881 Mr Chiene exhibited a patient most interesting to myself, as it reproduced precisely the conditions and results of a case in which I had operated a year previously with a like satisfactory success. Mr Chiene's case was a male patient in Dr Brakenridge's wards; in my own it was in an elderly lady. In both the condition was one of tetanoid spasm of the left sterno-mastoid muscle, in both the spinal accessory nerve was cut across, and in both with a successful result in arresting spasm and relieving the other secondary muscular disturbances.

On the 5th April 1800 Dr Wyllie showed a most curious result of tracheotomy, practised on a child for obstructive papilloma of the glottis. After wearing the tracheotomy tube for eighteen months the growth was found to have entirely disappeared, and by degrees the voice had been entirely restored, a fact vocally illustrated by his rendering of a verse of the "Happy Land."

Dr Hamilton's most curious and interesting exhibition, at our meeting of the 5th January 1881, of a patient from Chalmers Hospital in whom he had practised the method for which he suggested the title of sponge-grafting, in which a sponge introduced into a wound and retained there became, *first*, impenetrated by granulation tissue, *second*, absorbed, and *lastly*, covered in by cicatricial change in the granulation tissue. These phenomena, unlike the so-called organization of blood-clot, came to be effectuated without the interposition of any antiseptic agency.

Dr Finlay's case, shown on the 2nd March 1881, in illustration of the results in a case of trephining on account of severe injury of the frontal bone, bore out the contention that reproduction of bone takes place in some such cases to a greater extent than is very generally believed. The issue of the case after so serious an accident, where the patient was fit for laborious physical exertion in the daily exercise of his calling as a dock porter, testified to the skill and ability with which the treatment must have been conducted.

Dr Macgillivray's patient, shown upon the 1st December 1880, where he had removed an extensive epithelioma from the cheek, including the antero-external wall of the antrum, to which it was attached, and then atoned for a gap the size of the palm of the hand by a skilfully executed plastic operation, was certainly a triumph of artistic manipulation.

During the past two years—of chemico-pharmaceutic preparations and poisons we have had . .	2 exhibits.
Of mechanical contrivances, Of surgical and scientific contrivances, } .	2 „
Of graphic methods of delineation, . .	4 „
In all, in this class, .	8 exhibits.

The medicinal preparations were so recently the object of interest as hardly to need more than a passing allusion. It was at our last meeting, on the 7th December 1881, that Dr Allan Jamieson showed two specimens of the salve muslin invented by Dr Unna of Hamburg. The one was salve muslin, the other plaster salve muslin. These obviously formed cleanly and convenient applications, fitted to save time in effecting dressings in which unguents were employed.

The poisonous preparation was a specimen of wall-paper, shown by Dr Foulis on the 7th July 1880—a green and white paper, which had occupied a drawing-room wall for twenty-eight years, and which it was presumed had occasioned illness of most varied kind in every member of the family. The paper was found, by calculation from an analysis, to contain still enough arsenic to poison a thousand persons, but Dr Foulis regretted he could give no comparative statement of the loss in arsenic from the paper during these twenty-eight years.

On the 7th January 1880 our most ingenious member, Dr James, showed to the Society an instrument for the graphic demonstration of the co-ordination power of the muscles in maintaining equilibrium. By a pair of revolving tambours connected with a pair of receiving tambours, the movements were seen to be communicated, and tracings obtained. Specimens of these tracings in healthy persons and in cases of locomotor ataxy, chorea, etc., were exhibited and described.

Dr Wyllie exhibited and described, on the 1st December 1880, a new form of battery for medical use, in which the special feature was the mechanical rheophore invented by himself,—an instrument by which interruptions and reversals of the galvanic current could instantly be effected, as well as alternations of the galvanic and faradic current. This rheophore, as explained and its operations demonstrated, was found to work perfectly, and to be a model of ingenuity of design with simplicity of execution.

At the meeting of the 5th January 1881 Dr Kirk Duncanson brought before the members of the Society four new additions to the armamentarium of aural surgery, the invention of Dr Samuel Sexton of New York, consisting of—1, two pair delicate meatus forceps; 2, an oroscope; 3, a nasal speculum; 4, an aural powder-insufflator. These instruments were of American manufacture, and beautifully modelled and finished.

Dr Foulis's beautiful and effective demonstration of the circulation in the web of the frog's foot by means of the lime-light microscope, where the enlarged image was thrown upon a transparent screen, must have impressed every one who had an opportunity of seeing it at our last meeting (7th December 1881), as illustrating a new and most effective means of rendering such microscopic phenomena demonstrable to any number of persons at the same moment.

Dr Byrom Bramwell's series of graphic representations of cardiac sounds and murmurs, the distinctive feature in which was that the normal time relations of the sounds and silences on the cardiac cycle were preserved, attracted much interest even among the otherwise very important subjects which occupied the meeting of the 3rd November 1880.

On the 3rd of November Dr Wyllie exhibited a series of tinted lithographic charts intended to represent the fundus oculi as seen by the ophthalmoscope. These were so prepared as to admit of the use of pen, pencil, or colour in recording intra-ocular lesions.

The anatomical and morphological specimens were six in number.

First of these deserving notice was the cyclopean monster exhibited on the 8th November 1880 by Dr Byrom Bramwell, by means of photographic reproductions.

Next, by Dr Foulis, the head of a uterine embryo at the ninth week, showing the mode of development of the soft and hard parts of the face, as bearing upon the morphology of hare lip single and double, and the formation of the normal lachrymal sac and duct.

On the 5th of May 1880 Dr Foulis described and exhibited by means of a dissection of the parts, including the tongue, larynx, and pharynx, the employment of an instrument he had invented for treating the asphyxia of patients under anæsthetics according to Dr Howard's method. This instrument he had called the "*glossotilt.*"

At the meeting on the 1st December 1880 Dr A. G. Miller showed a carefully made drawing of the vulva of a female in the Lock Hospital suffering from gonorrhœa and syphilis, but in whom there was an unruptured hymen. Dr Miller attributed this condition to the lax and mobile condition of the membrane, and he alluded to the bearings of such a case upon circumstances occurring in medico-legal practice. He also mentioned that the drawing was made by Mr J. Grant.

On the 8th April 1880 Dr Miller showed specimens of an incisor tooth with a well-marked crescentic emargination due to congenital syphilis.

On the 5th of May 1880 Dr Miller showed a series of specimens of post-mortem fractures artificially produced, illustrative of extra- and intra-capsular fractures of the neck of the femur and of fractures of the lower end of the radius, fitted to impress the observer with the character of these injuries, as well as the mode in which such accidents are produced in the living patient.

There were of microscopic preparations of disease shown at the meetings of the Society, . . .	9 specimens.
Photographs of pathological condition and the results of operations, . . .	3 ,,
Drawings and casts, ...	3 ,,
	15 specimens.

Four of these demonstrations were given by Dr Byrom Bramwell, to whom the Society has been laid under very great obligations for his most interesting, lucid, and carefully elaborated pathological illustrations of recondite nervous lesions. The *first* of these demonstrations, upon the evening of the 2nd March 1880, was a series of sections of the spinal cord at different points, from a lunatic suffering from miliary sclerosis combined with and dependent on what was probably a waxy degeneration of the vessels of the cord, which from its anomalous reactions was probably undergoing fatty transformation. The *second* was given on the 2nd February 1881, consisting of a series of sections and drawings from a case of sclerosis of the medulla oblongata, pons varolii, and cerebellum, which had been under his care for eight years, and in which the patient died from pneumonia. The *third*, on the 5th January 1881, was a demonstration of a series of microscopic preparations and drawings illustrative of the pathology of infantile paralysis. The *fourth*, on the 1st December 1880, was a series of microscopic sections and drawings illustrative of some points in the morbid anatomy of locomotor ataxy.

Dr James Carmichael, on the 2nd November 1881, in illustration of the tubercular affection of the meninges which he exhibited, showed microscopic sections demonstrative of their intimate structure.

Professor Simpson showed a photograph, 4th May 1881, of Madam Cavalini, the first patient upon whom Porro performed his modified Cæsarean operation. The photographs showed two views of the patient and two views of the uterus which had been removed.

Mr Joseph Bell, on the 2nd November 1881, showed a cast of the arm of a patient who had sustained a fracture of the radius in an extreme degree, and in whose case the exaggerated deformity had been left unremedied.

Mr Chiene, on the 3rd November 1880, showed for Dr Paterson of Bahia a drawing illustrative of a peculiar disease known as "Ainhum" among the natives of Brazil. The Society had the advantage of Dr Paterson's presence, by whom the phenomena were described.

To Dr Allan Jamieson the Society were indebted, on the 7th April 1880, for a demonstration of the fungus of alopecia areata or tinea decalvans, in illustration of the views of Eichhorst of Göttingen. Again, on the 5th May 1880, Dr A. Jamieson showed a water-colour drawing of a warty induration of the skin, reported as a late tertiary syphilitic affection.

The other four microscopic and photographic illustrations of disease were, I believe, exhibited by myself, and were as follows:—3rd March 1880, microscopic characters of a case of subcutaneous nervous tubercle; 7th April 1880, microscopic characters of a case of adenoma from the parotid region; and, on the same occasion, microscopic specimens of a recurrent sarcoma from the lower jaw, and a fibro-cartilaginous tumour from the palatal bone. These specimens were cut and mounted by Dr D. Hamilton, to whom really the interest attaching to them was alone to be ascribed. A photograph illustration of the results obtained by a periosteal reproduction of the nose served to illustrate its permanent prominence after the lapse of two years from the date at which I had performed the operation, and a photograph of the case of adenoma of the parotid just alluded to was shown on the 7th April 1880.

Of pathological specimens, properly so-called, there were no fewer than 78 exhibits, as follows:—

Post-mortem specimens,	11
Tumours,	28
Calculi,	7
Hernia and hydrocele,	4
Bursal conditions,	1
Affections of the air-passages,	3
Eyeball,	1
Ear affections,	6
Amputations,	6
Joint affections and excisions,	8
Intestinal worms,	2
Cutaneous appendages,	1
	78

The pathological specimens derived from post-mortem examinations were as follows:—

On the 7th July 1880 Professor Spence showed a large axillary aneurism, with erosion of chest walls and scapula.

Dr James Carmichael, on the 4th February 1880, showed the bowels from a child, nine months old, who died from intussusception after six days' illness; and, upon the 2nd November 1881, tubercular tumours from brain of a boy, æt. 2½ years, with the microscopic specimens of the morbid tissue.

Dr Coldstream showed, upon the 2nd of April 1880, a very interesting specimen of the parts obtained from a case of strangulated femoral hernia, in which no relief followed the ordinary operation, apparently from adhesive peritonitis extending from the parts involved in the protrusion; and also, at the same meeting, a specimen of thoracic tumour, originating in the root of the left lung, and occasioning symptoms which had led to a diagnosis of pleuritic effusion.

Dr Cotterill, at the meeting of 20th June 1880, showed a specimen of fracture of the skull, with large, massive blood-clot, producing first symptoms of concussion, which merged into those of coma, from which the fatal result was attained.

On the 7th January 1880 Dr Miller showed the temporal bone and cerebellum from a patient who died from intra-cranial suppuration affecting the cerebellum. The case was one of long-standing suppurative otitis, in which a blow from a cricket-ball behind the ear seemed to have been the exciting cause of the fresh inflammatory departure. The free opening of the mastoid cells which Dr Miller had practised afforded only a temporary relief.

On the 2nd March 1881 Professor Simpson showed the uterus and ovaries from a case in which gastrotomy had been performed for removal of the ovaries six days before the patient's death. The operation was practised on account of fits of rhythmical movements of the nature of dancing mania. Death was due to suppurative peritonitis.

On the 7th December 1881 Dr Buist showed the thoracic viscera from a patient who died from pulmonary gangrene resulting from the conditions attendant upon malignant stricture of the œsophagus.

On the 4th February 1880 I showed a specimen of ruptured abdominal aneurism complicating the symptoms of gall stones; and, on the 5th May 1880, the kidneys of a patient who died with cirrhotic kidney on one side, and catarrhal nephritis, with abscesses containing micrococci, constituting a quasi-diphtheritis of the other kidney—a sequence of vesical catarrh.

The specimens of tumour exhibited amounted to 28.

Dr Joseph Bell showed, on the 7th July 1881, a most interesting specimen of osteo-aneurism of the ulna, resulting from an injury with sheep-shearing scissors.

Dr Cotterill, on the 2nd June 1880, showed for Professor Annandale (α.) testicle affected with medullary cancer, removed from a patient æt. 45; (β.) enchondroma successfully removed from the scapula in a patient æt. 22; (γ.) epithelioma of the hand successfully removed from a patient æt. 81; (δ.) malignant tumour of the tibia successfully removed by amputation above the condyles in a patient æt. 15.

Dr Miller, on the 7th July 1880, showed a cystic tumour removed by him from the inguinal region. The cysts were partially lined with columnar epithelium. From this fact it was concluded that the tumour probably originated in the structures of the round ligament.

Dr Cadell, on the 4th February 1881, showed a specimen of adenoma he had removed from the mammary region.

Dr Macgillivray showed the following tumours:—(α.) 3rd November 1880, two specimens of epithelioma removed from the lip and from the cheek. (β.) 2nd February 1881, an encysted hydrocele from the cord, removed by excision. (γ.) On the 2nd February 1881, the lower two inches of the rectum, including an epithelioma, successfully removed by excision.

My own exhibits in the department of tumours have amounted to 18 specimens:—

Jan. 7, 1880. Specimen of sarcoma growing subperiosteally from the base of the lower jaw.
„ Epithelioma developed in the cheek.
March 3, 1880. A penis amputated for epithelioma.
April 7, 1880. Diffuse mammary adenoma.
May 5, 1880. Cystic tumour removed from volar region of thumb.
„ Encapsuled spindle-celled sarcoma of mamma.

May 5, 1880.	An adenoma from the parotid region.
„	A sarcoma growing subperiosteally from the lower jaw.
„	Upper jaw, with spindle-celled sarcoma growing from its palatal plate.
„	Half of the tongue, removed by the thermo-cautery on account of a rapidly growing epithelioma.
March 2, 1881.	Two specimens of lymphangioma of the tongue, in which the protruding portions were removed by means of the thermo-cautery.
Dec. 1, 1881.	Pedunculated exostosis growing from the metatarsal region of great toe.
June 1, 1881.	Recurrent spindle-celled sarcoma from groin.
„	Chronic abscess of epididymis and testis, with caseation, or so-called tubercular testis.
„	Recurrent spindle-celled sarcoma from the calf and popliteal space.

The specimens of urinary calculi exhibited amounted to seven.

Mr Joseph Bell showed three examples, all with interesting histories:—(α.) 6th July 1881, calculus the size of a bantam's egg, removed by the scoop from a case where the greatest diameter of the outlet was only two fingers'-breadth. (β.) On the same evening, a stone weighing 11½ oz., removed after death by the suprapubic operation. (γ.) A calculus from a child, removed by the ordinary lateral operation.

Dr Miller showed, Dec. 7, 1881, two calculi fitting into each other and polished by attrition, removed from the urethra by incision.

Dr Foulis, on the 3rd of March 1880, showed a small oxalate of lime calculus from a patient affected with uterine fibroid.

I myself showed two specimens—one upon the 7th July 1881, weighing a quarter of a pound, removed successfully by the lateral operation; the other, upon the first of June 1881, for Dr Mackay of Huevla, which, although an ounce in weight, had been spontaneously evolved from the bladder of a young girl æt. 16.

The specimens of hernia and hydrocele were five in number.

Dr Cotterill, on the 2nd June 1880, showed a hematocele sac excised along with the testicle in consequence of a non-curative result following tapping and injection; and, on the same occasion, the sac of a femoral hernia, with closely adherent omentum, removed in a case of irreducible hernia; while, on the 7th of July 1880, I showed two large masses of omentum removed from cases of inguinal hernia, and where closure of the inguinal aperture was effected by stitching. Again, on the 1st of June 1881, I showed another specimen, consisting of a large hernial sac removed in the radical treatment by stitching of a very large and irrestrainable inguinal hernia.

Bursal tumours, one. Upon the 7th of July 1880 Dr Macgillivray showed for Dr A. Thom, jun., of Crieff, large bursal sacs removed from the patellar region.

Specimens illustrative of affections of the air-passages, four. You cannot fail to remember Professor Spence's most interesting specimen, exhibited on the 7th July 1880, obtained from the body of a lad who died in consequence of the insufflation of a puff-arrow into his bronchus, and where ineffectual efforts had been made to effect its removal after tracheotomy.

The specimens of membranous masses expectorated from the bronchial tubes in a case of plastic bronchitis, shown by Dr Cadell on the 4th February 1880, and the very remarkable example of coloured sputa shown by Dr Sidey, 5th May 1881, must only need to be mentioned to be recalled to your recollection.

The melancholy interest which attaches to a case of unsuccessful tracheotomy rightly performed for relief from suffocation in diphtheria was markedly elicited in connexion with the specimen of this affection, involving larynx, trachea, and bronchi, in a case operated on by Dr Coldstream, shown Nov. 2, 1881.

The amputations exhibited were six in number.

Dr Miller, on the 4th Feb. 1880, showed an arm he had been obliged to remove on account of sloughing and hæmorrhage resulting from erysipelas.

The other five specimens were shown by myself, viz.:—

Jan. 2, 1880.	A foot removed for gangrene following injury.
July 7, 1881.	A foot removed on account of extensive caries.
Nov. 3, 1880.	An arm amputated at the shoulder-joint on account of failure to obtain cicatrization after an extensive burn.
March 2, 1881.	A foot amputated on account of extensive and destructive syphilitic ulceration.
Dec. 1, 1880.	A limb amputated at hip-joint, by Mr Furneaux Jordan's method, for cario-necrosis of head and neck of femur.

The illustrations of joint-diseases and excisions exhibited amounted to eight.

Mr Joseph Bell showed a large loose cartilage removed from the knee-joint on 2nd November 1881, where preliminary transfixion of the movable body with a needle was adopted to secure retention when the joint was opened.

Dr Macgillivray, on the 7th July 1881, showed for Dr A. Thom, jun., of Crieff, two specimens of excision of the elbow-joint.

The remaining five specimens were shown by myself. (*a*.) On the 7th July 1880, the external condyle and capitulum of the humerus, which had been broken off and detached so as not to admit of satisfactory adjustment, when a strong joint with free play resulted. (*β*.) 5th May 1880, the parts removed in a case of recent excision of the knee-joint. (*γ*.) Two knee-joints removed by excision. (*δ*.) 6th July 1881, a knee-joint excised for suppurative gelatinous disease.

Of eye specimens we had but a single example, shown us upon the 6th April 1881 by Dr Argyll Robertson. It was an interesting instance of a foreign body, consisting of a particle of steel, which had penetrated the globe, and, resting on the retina, had become attached to its surface. Preliminary efforts were made to withdraw the foreign body by means of the magnet, but as these failed, enucleation of the globe was had recourse to. The specimen showed the particle of steel as described, and a drawing made according to Dr Wyllie's ingenious plan exhibited the appearances as observed by means of the ophthalmoscope.

Dr Kirk Duncanson, on the 5th January 1881, showed to the Society the only pathological specimen appertaining to the sphere of purely *aural surgery.* This was an example of necrosis of the right temporal bone involving the labyrinth. The portion of bone had been removed from the meatus of a girl æt. 9, who had suffered from suppurating ears from infancy.

Of morbid cutaneous appendages, Dr Allan Jamieson showed an excellent example of *onychogryphosis* removed by evulsion.

Of intestinal parasites we have had two examples shown.

Dr Foulis showed a *Tœnia mediocanellata,* 15 feet in length, passed by a patient under his care who had recently returned from Zululand, where this unwelcome inmate of the intestinal canal is prevalent among both natives and Europeans, where the half-cooked meat and very impure water are supposed to be the source of infection.

Dr Church, upon the 2nd March 1881, showed a lumbricus 10½ inches in length, which had been vomited by a lady. From the symptoms it was inferred that the worm, developed low down in the small intestine, had gradually made its way up the alimentary canal to the stomach.

Gentlemen, this enumeration of exhibits serves to show that in the department of operative surgery and in that of scientific pathology the members of the Society have been neither backward nor uninterested, while it is a source of congratulation that neither in operative surgery nor in pathology has the stream flowed only through hospital channels, but that private practitioners and our brethren from the country, and even abroad, have not been forgetful of our interest in all that serves to illustrate any advance, whether in the domain of practice or of scientific investigation.

Turning our attention for a little to the more formal public business of the Society, I find the papers which have been submitted in the billets of meeting, and read and discussed, may be classified under these heads:—

Physiological, ...	2
Therapeutic, ...	3
Medical, ...	12
Surgical, ...	9
Cutaneous affections and syphilis, . .	5
Total, . .	31

The first physiological paper was communicated to us by Dr Hamilton on the 6th April 1881, upon "the Physics of Inflammation illustrated by Experiment." This paper is not likely soon to be forgotten by any one who was present on the occasion, when, by a series of most ingenious illustrations in the physics of analogy, every statement was reduced to the test of experiment, and the views maintained seemed to be most fully justified by demonstrated facts. The interest felt in this exposition and demonstration was sufficiently shown by the vote of thanks of the Society formally accorded to Dr David Hamilton on the motion of Mr Chiene, seconded by Dr Angus Macdonald.

The other physiological paper was read by Dr James, upon the 20th July 1881, "On the Reflex Inhibitory Centre Theory." The author showed that the facts upon which the theory of an inhibitory centre regulating and controlling reflex actions might quite as reasonably be explained by supposing that the removal of the higher centres prevented the diffusion of nerve force. The theory of a mechanical equivalent of brain work founded upon the amount of contractility of a muscle as gauged by a definite weight, before and after the removal of the brain, was discussed. The fact that a reflex contraction requires greater stimulus than a direct contraction was alluded to, as well as the absorption of force in the nerve-cells. The influence of the sheath of Schwann and the white substance as effecting an increase in tension was discussed, while the possible part played in the process of the direct absorption of the solar energy in animals by the nervous system was indicated and considered as a possible source of nerve-force. This paper originated a most lively and interesting discussion.

The therapeutic papers were three in number.

1*st*, Dr Brakenridge, upon the 1st June 1880, read an elaborate and most interesting communication upon the actions and uses of citrate of caffeine as a diuretic, in which the great practical conclusion at which the author arrived—viz., that the citrate of caffeine possesses a special power of stimulating the secreting cells in the kidney, while its effect as a vascular diuretic, if present at all, is very feeble—seemed to be abundantly justified.

2*nd*, Professor Fraser, on the 6th July 1881, read his exhaustive analysis of the inquiry he had recently conducted into the influence of salicine and salicylate of soda in the treatment of acute rheumatism accompanied with inflammation of the genito-urinary mucous membrane. The facts stated seemed to lead most legitimately to the conclusion that their influence was altogether negative.

3*rd*, Dr Carrick of St Petersburg, upon the 6th July 1881, communicated to the Society his most interesting and very complete account of the Koumiss cure. The very special opportunities Dr Carrick had enjoyed for studying the use of this remedy in its native habitat made every statement he emitted the more trustworthy, and elevated the praise of this remedial agent from the category of a mere advertisement of the biassed opinion of a manufacturer to the level of the record of an opinion founded upon a scientific basis of observation. This formulated opinion will no doubt encourage those who heard Dr Carrick's views upon the use of koumiss to recommend it as possessed of definite and well-observed therapeutic qualities. The interest attaching to the description of the life at Samara, in the Steppes, excited the hope that, as a new health-resort, with its koumiss cure, invalids who may be induced to go thither may reap results which they have found unattainable in localities nearer at hand and hitherto better known.

The papers upon medical subjects numbered twelve.

1. Dr Allan Jamieson's suggestive and carefully elaborated paper upon "Cleft Palate and Incisor Teeth, an Instance of Heredity," read upon the 7th April 1880, was recognised as an important contribution to developmental science.

2. On 5th May 1880 Mr E. S. Brander's interesting paper on "Diseases of the Andaman Islands" was communicated to the Society by Dr John Smith. Its very interesting observations upon the syphilitic complaints of the Andamanese, together with a *résumé* of the cases which had been under Dr Brander's care while in charge of the hospital in these islands, showed that, with keen powers of observation and comparison, this gentleman could be placed in no sphere of professional usefulness without making a good use of his opportunities for extending the area of his own knowledge, and without rendering his observation useful and available to others.

3. On the 2nd of June 1880 Dr James Dunsmure, jun., communicated a further note upon a case in which temporary loss of voluntary power was produced by a touch on the head. The paper not only contained the elements of precise and accurate observation of the further progress of a case already described, but elicited a most interesting and able discussion by those members of the Society whose special field of observation has been that of nervous diseases.

4. At the same meeting, Professor Fraser's exhaustive paper on "A Case of Malignant Disease (Sarcoma) of the Lung," in which the history, symptoms, morbid anatomy, and pathology of the diseased condition were most elaborately considered in the light of ripe clinical experience, formed a monument of clearness and skill well worthy of imitation.

5. On the 7th of July Dr Beck's very interesting paper upon a condition which may lead to fallacy in the diagnosis of abdominal aneurism, met the approval of all those members whose experience in the field of abdominal diagnosis gave them the best right to speak authoritatively on such a subject.

6. Dr Byrom Bramwell, on the 5th of January 1881, communicated his elaborate and most practical paper on the "Differential Diagnosis of Paralysis," in which his personal knowledge of the

subject from a practical standpoint was quite as conspicuous as his reading and careful consideration of the views of others was enlightened and appreciative.

At this meeting (5th January 1881) Dr M'Bride, whose name is familiar among us in connexion with otology, gave us a medico-physiological digest of the "Pathology of Vertigo," in which he manifested quite as great an aptitude to deal with recondite physiological questions, as to apply the observations gleaned from familiar phenomena in practice to support the line of theory he had been led to adopt.

8. Upon the 2nd March 1881 Professor Grainger Stewart read his original paper upon "Peripheral Paralysis from Disease of the Nerves," which contained a detail of symptoms and pathological lesions upon which his claim to be the discoverer of a new disease might very reasonably be maintained.

9. Dr Davidson's paper upon the "Acute Anæmic Dropsy" observed by him in the Mauritius was welcomed by all as the labours in a new field of an old friend, whose marvellous work in Madagascar as a medical missionary, a high officer of state, and last, not least, a great surgeon, must be fresh in the memory of all of us.

10. Nor were we otherwise than gratefully recognisant of the remembrance of our Society by Dr John Wortabet of Beyrout in his paper entitled "Notes of a Case of Severe Chronic Jaundice," in which recovery took place, with which we were favoured on the 6th of July 1881.

11. Dr Leslie's interesting demonstration of the application of the graphic method to the tabulating and collecting of details as to heredity in disease, was evidently a step in advance towards a means of securing accuracy in the comparison of cases and the exhibition of general results which had not hitherto been reached.

12. Dr Carmichael's paper, read on the same evening (7th December 1881), on "Some of the Sequelæ of the Acute Infectious Diseases of Infancy," was characterized by a sagacious capacity to grasp the salient points of a large experience, gained both in the arduous labours of private practice and in the more interesting sphere afforded by the Royal Hospital for Sick Children.

The surgical papers were nine in number.

1. The first surgical communication was read upon the 4th of February 1880 by Dr John MacWatt, Resident Medical Assistant, Glasgow Royal Infirmary, upon "Two Cases of Spina Bifida in the Cervical Region, treated by Dr Morton's (Glasgow) Injection of the Glycerol of Iodine," in which one was cured. The other died, after the lapse of some time, from hydrocephalus.

2. A most important paper by Mr Silk, communicated by Mr Chiene, was read to the Society upon the 3rd March 1880, entitled, "Note on the Cause of Death during the Administration of Chloroform." The circumstances in which this paper was brought before the Society need not be referred to. They were, however, of

a kind which rendered a professional discussion of the subject of chloroform administration very desirable. The result was, I feel confident, most satisfactory to a very large meeting, the general tone of the discussion indicating no diminished confidence in chloroform, no increased fear in its application, no feeling that professional chloroformists were more required than heretofore to render its employment safe, and that in its use no apparatus was more effective or more safe than a common towel or a pocket-handkerchief.

3. A complementary communication to this, as Dr Foulis's paper of the 8th of July 1880 might be regarded, upon the "Treatment of Asphyxia during the Administration of Anæsthetics," was the subject of an interesting discussion, which only helped to intensify the expression of confidence in the use of chloroform as the most satisfactory anæsthetic hitherto employed.

4. At the same meeting (7th July 1880) Mr Joseph Bell read his interesting Notes of a Case of Abscess in the Abdominal Cavity, in which the rarity of the case and its fortunate issue, attributable to the very sagacious treatment employed, rendered it a subject of marked attention.

5. Mr Annandale's most interesting and suggestive communication, of the 3rd November 1880, upon the "Radical Cure of Hernia with the aid of Catgut and Listerian Antiseptics," was felt to open up a new point of literary departure in the radical cure of hernia.

On the same evening (3rd November 1880) Mr Chiene read his very important paper upon "Bladder-Drainage." The plan of treatment advocated, having the sanction of successful trial, may reasonably be expected to modify very materially the prognosis and treatment of cases of vesical loss of power due to enlarged prostate or to stricture of the urethra.

7. On the 2nd of February 1881 Dr Symington read his paper upon the "Anatomical Relations of the Trachea in the Child"—a communication with an anatomical title, but with most important practical bearings upon the operation of tracheotomy.

8. Upon the 7th April 1881 Dr A. G. Miller's interesting communication on the "Epidemic of Erysipelas occurring in the Old Royal Infirmary in the Winter of 1879–80" was felt to be replete with practical suggestions.

9. Upon the 2nd November 1881 Mr Joseph Bell's "Note on the Treatment of Rupture of the Urethra" was communicated to us, in which, in those cases where the rupture was due to injury, he inculcated the necessity of never allowing a drop of urine to pass the sphincter vesicæ into the injured urethra for at least ten days, attracted general interest, and appeared to commend itself to the convictions of all present.

The papers on syphilis and diseases of the skin were five in number.

1. We had a most carefully elaborated communication from Dr W. Allan Jamieson upon "General Exfoliative Dermatitis," illus-

trated by clinical details of picturesque interest and practical therapeutic value. This paper was read on the 4th February 1880.

2 and 3. Professor Grainger Stewart, upon the 5th of May 1880, communicated—1. "Notes of a Case of Molluscum," by Surgeon-Major Kenneth Macleod, M.A., M.D.; 2. "Notes of a Rare Form of Elephantiasis," by David Playfair, M.B. Both cases were of curious interest, and both were pictorially illustrated in a manner to make that interest impressive.

4. On the 1st December 1880 we had a most interesting paper and consequent discussion upon the Contagious Diseases Acts by Dr Cadell, in which he arrived at the following formulated conclusions:—1. Syphilis is not a sufficiently serious disease to require any special legislation, and, even granting that legislation were necessary, that these Acts, on account of their one-sided and unscientific character, are not fitted to grapple successfully with such a subtle disease as syphilis. 2. The Acts do not lessen the amount of gonorrhœa in the army and navy. 3. They have a beneficial influence in preventing non-syphilitic sores in the army and navy. 4. These Acts give too much power to the police, and are tyrannical. 5. They reduce the number of public prostitutes, thus tending to increase clandestine prostitution, and, as a consequence, disease, among the population.

In the discussions emanating from these communications we had most important contributions from different members to the information brought to bear upon the subject-matter of discussion. The members of the Society who took part in the discussions were as follows:—Annandale (3), Joseph Bell (6), Black (4), Brackenridge (4), Bramwell (5), Bruce (1), Buist (2), Cadell (3), Carmichael (6), Chiene (7), Clouston (3), Coldstream (1), Blair-Cunynghame (3), Duncan (2), Dunsmure (1), Finlay (2), Foulis (2), Fraser (3), Furley (1), Gardiner (1), Gillespie (1), Gray (1), Hart (1), D. Hamilton (2), Imlach (1), James (2), Allan Jamieson (10), Leslie (1), Macdonald (1), Macgillivray (2), Miller (5), Ritchie (1), Argyll Robertson (2), Sanders (2), Shand (4), Simpson (4), Sinclair (1), Smith (2), Spence (1), Grainger Stewart (7), Symington (4), Taylor (2), Watson (12), Wyllie (1).[1]

Let me say, further, that the number of new members who have joined our ranks during the two past years amounts to twelve names, while eight have been removed by death; that the addition to our foreign and honorary members has consisted in the elevation of Dr Sharpey to the honorary list; of Prof. Heger, Freiburg, Prof. Albert of Vienna, Prof. Esmarch, Kiel, and Dr Sayre, New York, to that of foreign corresponding members; and of Mr Spencer Wells, London, Dr J. B. Williams, London, Dr J. T. Banks, Dublin, Mr G. H. Porter, Dublin, and Prof. Pirrie, Aberdeen, to the corresponding membership of the United Kingdom.

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[1] The numbers within parentheses indicate the number of times during the two sessions each member took part in the discussion.

The only item of business which remains upon the minutes of the Society as a legacy to the ensuing session is the question of the publication of our Transactions. Dr Craig, at our last meeting, intimated his intention to move in this matter, and the success which has attended the efforts of the Obstetrical Society in this direction leads us to hope that a better memorial of the great work done in each year by this Society than such a cursory survey by your president may, by the conclusion of the session, be in the hands of each member.

Any success which has attended upon these meetings demands the most ample acknowledgments to the secretaries, by whose careful arrangement of the business your comfort and the smooth progress of the work have, as heretofore, been entirely due. To the sage advice of the vice-presidents and council, so readily accorded me, my cordial thanks are gratefully recorded. To our treasurer your best thanks are, I am sure, heartily granted.

Gentlemen, I fear I have wearied you by this *résumé* of your two years' work. I have now but one act to perform in bringing my duties to a close—that is, to thank you most sincerely for your placing me in this chair, for your uniform courtesy and kindly forbearance extended to me while I have attempted to occupy it. In retiring from it I can most conscientiously assure you that I feel, in the choice of my successor, you have committed your interests into the hands of one far fitter than I to do justice to the position,—one who was a man of professional distinction twenty-five years ago,—one whose name was as highly esteemed then as the author of papers on therapeutics as it is to-day as an author and teacher,—one who has since made his mark in many a varied sphere of professional activity,—one, therefore, who, in presiding over your deliberations, will bring to bear upon any topic which may emerge the same golden experience, gleaned in other fields besides that of pure physic, in which we must ever regard him as occupying a prominent position in the van of pioneers who add new territory to the domain of enlightened medicine.

Part Second.

REVIEWS.

Manual of the Physical Diagnosis of Diseases of the Heart, including the Use of the Sphygmograph and Cardiograph. By ARTHUR ERNEST SANSOM, M.D. London, F.R.C.P., Assistant Physician to the London Hospital, etc., etc. Third Edition. London: J. & A. Churchill: 1881.

THIS—the third—edition of Dr Sansom's well-known manual has been thoroughly revised, and a considerable amount of new and original matter has been added.

In the introductory chapter we notice an important section on angina pectoris. Taking the condition of arterial tension, between the paroxysms, as his guide, the author divides cases of angina pectoris into two groups. In the *first* he includes cases in which the arterial tension is not increased during the intervals; this group comprises for the most part the exceptional cases of angina pectoris which occur during the earlier periods of life; in these cases the paroxysm results from a sudden contraction of the arterioles, which causes a rapid increase of the arterial tension and consequent over-distention of the left ventricle; the contraction of the arterioles may, Dr Sansom thinks, be due to direct external causes, such as exposure.

The *second* group includes the great majority of cases of true angina pectoris. In these cases the arterial tension is *persistently* high, though it is still further increased during the paroxysm. Undue exertion and effort are frequent causes of an attack, but in many cases the paroxysm occurs without obvious cause, and in such cases Dr Sansom thinks it probably results from direct interference with the nervous mechanism. In support of this view he quotes a case recorded by Lancereaux, in which the fibres of the aortic and cardiac plexuses were found on post-mortem examination to be directly involved by disease at the base of the aorta (aortitis), and says, "Seeing the common association of the cases of angina which fall under this section, with disease of the arterial coats, it seems very reasonable to link the nerve-phenomena with an affection of the sympathetic filaments which are in such close relation to the coats of the vessel. If we accept this view, the calcification of the coronary arteries—heretofore supposed to induce the symptoms through the degeneration of the heart muscle, which, by impairing the blood-supply, it occasions—is the cause of the pain rather by the direct implication of the cardiac plexus. It is quite true that cardiac degeneration follows coronary obstruction; but this is a cause, not of the pain, but rather of a fatal issue."

He considers that there is a strict analogy between the large class of cases of angina pectoris which are associated with atheromatous disease of the great arteries and with cases of epilepsy which are found to depend upon direct irritation of the nerve centres. In the former, owing to irritation of the nerve fibrils involved in the wall of the diseased artery, there are periodic explosions, expressed by the tight contraction of the arterioles and the consecutive heart struggles, whilst in the latter the expression of the maximum of central irritation is an epileptic fit.

He strongly recommends the use of the sphygmograph for the purpose of ascertaining the exact condition of arterial tension in cases of angina pectoris, and quotes cases in support of its diagnostic value.

We would also direct attention to the section on reduplication of the heart sounds (page 109 *et seq.*) This difficult subject is very fully and ably handled, and a new view advanced to explain the reduplicated second sound in mitral stenosis. Dr Sansom thinks the reduplication can best be explained by supposing that the first element of the reduplication is the normal second (pulmonary) sound, and that the second element of the reduplication results from the sudden tension of the abnormal mitral-curtain produced after the relaxation of the left ventricle. He is not prepared to say that systole of the auricle is *essential* to produce this sudden tension; possibly, he thinks, the reaction of the distended pulmonary veins and left auricle may be sufficient to cause it. We must refer the reader to the original for the arguments and clinical facts with which the author supports his theory.

An admirable description of the sphygmograph and cardiograph, copiously illustrated by original tracings, occupies nearly one-third of the volume.

The index might, we think, with advantage be much fuller.

We can cordially recommend the book as one of the most thorough and trustworthy guides to the physical examination and diagnosis of diseases of the heart with which we are acquainted.

Excision of the Tongue. By WALTER WHITEHEAD, F.R.C.S.E., F.R.S. Edin.

THIS is Mr Whitehead's paper, read at the Medical Congress. In it the operation of removal of the whole tongue by scissors, known as his operation, is described and advocated. This operation was favourably noticed by us in the Journal for December last year, in a review of Mr Lund's pamphlet.

In the present paper Mr Whitehead gives a table of twenty-eight cases with five deaths. This percentage (17·9) is less than that from other methods, which Mr Whitehead quotes at 30 to 60 per cent. He does not state, however, where he gets these figures. Mr Whitehead condemns the ecraseur on the double ground that it does not prevent hæmorrhage nor septic absorption. He considers the instrument incapable of crushing the arteries or lymphatics sufficiently to cause their occlusion. We can confirm this, having seen hæmorrhage in several cases where an ecraseur was employed. We have seen the scissors used in operations for removal of the tongue (though not relied upon alone, as in Mr Whitehead's operation), and can vouch for their being cleaner, easier to work, and quicker in operation than the knife or cautery. We think that removal by scissors will come to be *the* operation.

An Index of Surgery. By C. B. Keetley, F.R.C.S. London: Smith, Elder, & Co.: 1881.

This is a manual intended for the use of students "shortly before going in for final examination." As far as we have examined the book, it is trustworthy, and, though partaking somewhat of the "cram" character, it is not objectionable. In fact, the book would be almost worthless except in the hands of one already well versed in the subject from other sources. Being small, the work is necessarily deficient in some points. We have noticed the deficiency more particularly in regard to operations.

Surgical Diagnosis: a Manual for Practitioners and Students. By Ambrose L. Ranney, A.M., M.D. New York: William Wood & Co.: 1880.

The plan of this work is to give a short description of various allied affections, and then to contrast them in parallel columns—as anthrax and furuncle, intra- and extra-capsular fracture of the hip, fracture of ribs and pleurisy, hemorrhoids and condylomata, etc. Dr Ranney also gives tables of varieties of affections with their characteristic signs, as in herniæ, dislocations, joint-affections, etc. The book is well got up, readable, thoroughly reliable (as far as we have investigated), and, on the whole, a valuable addition to surgical literature.

Teaching and Healing: a Sermon preached before the Medical Congress in St Paul's Cathedral, August 7, 1881. By H. P. Liddon, D.D., Canon Residentiary of St Paul's. Also, *The Preservation of Body and Soul and Spirit: a Sermon preached in Westminster Abbey on the Same Occasion.* By Alfred Barry, D.D., D.C.L., Canon of Westminster, Principal of King's College, London, and Chaplain-in-Ordinary to the Queen. Published by desire of the Executive Committee of the Congress. London: Rivingtons, Waterloo Place.

It is not deviating, we think, beyond the lines of our Medical Journal, to notice these discourses, preached and published at the desire of that great International Congress which signalized the first week of August 1881. Surely it was a right and suitable arrangement to recognise by public service in the splendid fanes of St Paul's Cathedral and Westminster Abbey, filled with glorious memories, that union of religion and healing for the body which dawned upon the world during the Saviour's personal ministry, and has been growing more conspicuous as the centuries roll on.

Both these eminent divines recognise this union in their discourses, and evidently wish to emphasise its reality. Without venturing to institute comparisons, we may say that, with the same high aim, each will find a response in the mental proclivities and tastes of different hearers. We confess to a preference for that of Canon Liddon, on account of its greater simplicity, directness, and luminous application. The following passage, among many equally characteristic, while very appreciative of our honourable calling as physicians and surgeons, suggests an obvious lesson worthy of being pondered by every one who finds himself in the responsible circumstances so eloquently described:—

"The physician is a prophet; and this character is never so apparent as when life is drawing towards its close. Often, when, to the sanguine ignorance of friends, the bright eye and the buoyant step seem to forbid serious apprehension, medical science already hears not uncertainly the approaching footsteps of death. There is a point at which all forms of highly cultivated knowledge become instincts; they are certain of their judgments, even when not able to produce a reason. And no man can have passed middle life without being struck with the sort of second sight, as it may well seem, which is at the command of an accomplished physician. Would that I might be permitted, in the freedom of my ministry, to say a word as to the use of this tremendous power! Too often, when science knows that death is inevitable, the dying man is allowed to cherish hopes of life, with a view to possibly prolonging for a few more days or hours the struggle for physical existence; and thus the precious, the irrevocable moments pass, during which the soul, by acts of faith, and hope, and love, and contrition, might unite itself to the Divine Redeemer, and prepare itself for the presence-chamber of the Judge. Brethren, it is not for this that your higher knowledge is given you; it is not for this that the departed will thank you when you too meet them in the world of spirits."

Leaves from a Naturalist's Note-Book. By ANDREW WILSON, F.R.S.E., F.L.S., etc., Author of "Leisure-Time Studies," etc. London: Chatto & Windus, Piccadilly: 1882.

NOT long ago we had pleasure in recommending to our readers a work by the same author, more exclusively devoted to natural history. This new book, although written in the same light and jaunty style, is more discursive, and contains several papers, such as "Science and Crime," "Lost and Missing," "In some Medical By-ways," which have a sensational interest, and are fitted, as the author suggests, to while away the tedium of a railway journey or an idle hour. Mr Wilson has already made a reputation for himself as a popular lecturer; and we shall be glad to find him at no distant date addressing himself, as he is well able to do, to some more elaborate work which will deserve a leisurely and careful perusal.

Address delivered at the Dedication of the Hall of the Boston Medical Library Association, on 3rd December 1878. By OLIVER WENDELL HOLMES, M.D., President. Cambridge University Press: 1881.

WE have formerly given our warm approbation to the professional writings of this gentleman, and were prepared to find his address on the important occasion referred to worthy of his high reputation. We have not been disappointed. Although rhetorical and ornate, it is at the same time eloquent and full of suggestive thought, dwelling upon the importance of books which have survived for generations as counteractives to the hurried and often ephemeral productions of the present day. But Dr Holmes has no wish to disparage the latter. He recognises much valuable although scattered instruction throughout the teeming pages of the monthly and weekly journals, and urges in an emphatic manner the extreme importance of having full and accurate indexes prepared incessantly, so that it may be possible to get access to what is really good after the annual volumes have been bound and relegated to the back shelves of the library. This subject of catalogues and indexes has been very forcibly discussed—or, rather, brought luminously before the minds of literary men—in Shepherd's recent memoir of Thomas Carlyle, who, by the defective nature of such aids, was nearly foiled in the library of the British Museum while engaged with his life of Frederick the Great.

The following sentences from Dr Holmes's address deserve consideration :—

"I have spoken of the importance and predominance of periodical literature, and have attempted to do justice to its value. But the almost exclusive reading of it is not without its dangers. The journals contain much that is crude and unsound; the presumption, it might be maintained, is against their novelties, unless they come from observers of established credit. Yet I have known a practitioner—perhaps more than one—who was as much under the dominant influence of the last article he had read in his favourite medical journal as a milliner under the sway of the last fashion-plate. The difference betwixt green and seasoned knowledge is very great, and such practitioners never hold long enough to any of their knowledge to have it get seasoned."

Several additional short addresses were delivered on the same occasion, forming an elegant little volume well worthy of perusal.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING IV.

Wednesday, 1st February 1882.—Dr G. W. BALFOUR, *President, in the Chair.*

I. *The President* moved that a suitable minute should be prepared, expressive of the loss the Society felt it had sustained in the death of Sir Robert Christison, and, further, that the Secretary should be instructed to send a copy of it to Sir Robert's family. Sir Robert had, it was true, considerably outlived the span allotted to mankind, but the Society could not but mourn his death as that of one of its best-known and most prominent members, and its oldest surviving Presidents, Sir Robert having occupied the chair nearly fifty years ago (1835).[1]

II. *Dr Foulis* gave a demonstration of the OXY-HYDROGEN LANTERN MICROSCOPE. This apparatus enabled him to show the circulation of the blood on a very large scale, as also microscopical preparations. By it, also, he would be enabled to photograph any preparation he wished. The idea of having a semi-transparent piece of glass on which to show the rays of light passing through the lens came to him after witnessing the pictures thrown on the focussing-glass of a camera. By this instrument objects were seen, not by reflected, but by transmitted light. By its means, he thought, we should be able to photograph all microscopic objects that could be thrown on a screen. All that required to be done was simply to put a sensitive plate in the place of the semi-transparent glass, and thus the picture would be fixed. (The lantern was then put in action, and the circulation through the web of a frog's foot shown. The animal lay quite still, nothing being done to it beyond covering its head with a wet cloth. It was not curarized, as it was believed that would have been contrary to the law. The circulation in the capillaries, the blood-corpuscles, and the pigment-cells were all clearly shown. Dr Foulis stated that it was possible to magnify portions of this picture by means of the microscope, and the blood-corpuscles could be seen greatly enlarged in this way.)

III. *Dr Allan Jamieson* showed (1.) a PATIENT with a peculiar affection of the palms of her hands—psoriasis palmaris, or exfoliative dermatitis. The patient, a widow, stated that the disease began first on the soles of her feet about eight years ago. A year after, the palms were affected, and the disease extended to the wrists. Since then it has remained in much the same condition. She has had a family of nine children. One of them had some sort of an eruption on its nates. A specific history was, however, difficult to ascertain. One feature of the case was its great intractability to treatment. He had tried tar, chrysophanic acid, calomel ointment, arsenic, and mercury, but nothing seemed to have done much good. There were no spots on the body in 1879, when she first came under his care; but six months ago a spot of psoriasis appeared on the right knee, and another under the right elbow. The case closely corresponded in appearance to two of Sir E. Wilson's plates, showing what he called erythema syphiliticum palmare. (2.) A specimen of NODOSE HAIRS, given him by Dr Walter Smith of Dublin. They were removed from the head of a woman aged 19. There were alternate enlargements and contractions of the hair at regular intervals—a species of rhythmical atrophy of the hair of a peculiar character. The nodes were pigmented, the internodes were not. Treatment had produced no effect as yet. Otherwise the patient was in perfect health.

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[1] Sir Robert Christison was elected a member of this Society in 1822, and there still survive two members of a similar standing, Dr Combe, also elected in 1822, and Mr William Brown, elected in 1821.

IV. *Mr Joseph Bell* had been asked by Dr Hamilton of Hawick to show the Society a somewhat trivial-looking SPECIMEN, which had, however, given the doctor and his assistant a good deal of trouble. The doctor was asked to see a child suffering from obstruction of the bowels. There was no hernia. He gave it a dose of castor-oil without effect. He then ordered his assistant to give it an enema. The enema-pipe could not be introduced into the rectum on account of some obstruction there. The doctor was sent for, and, after some trouble, succeeded in removing a small whinstone. There was no history as to how it got there. It was supposed it might have been inserted for some felonious purpose, but the more probable view was that the child had swallowed it.

III. *Dr Hamilton* read Professor Fraser's communication on A CASE OF DIABETIC COMA WITH LIPÆMIA, which will appear in a future number of this Journal.

The President said the Society must feel greatly indebted to Professor Fraser for his interesting paper. The most recent writer on the subject, Jænicke, held that acetone in the blood was derived from the stomach and bowels, and was due to imperfect digestion of the animal diet so commonly given in diabetes. So confident was he of this, that he declared that in all cases in which animal diet was given, acetone could be detected in the urine in twenty-four, or at the longest forty-eight, hours, by means of the burgundy red colour developed on the addition of the perchloride of iron. Acetone was believed to exist in the blood as an acetic ether (acetessigsäureäthyläther) derived from the stomach and bowels of those fed on a highly animalized diet. The fatty matter in the blood was probably due to the splitting up—under unknown conditions—of the albuminates in which the blood of such patients was so rich. The ether emulsionized this fat, which circulated freely during life, and it seemed highly probable that death was really due to acetone poisoning, and that the pneumonia of lipæmia and fat embolism were mainly post-mortem appearances due to escape of the emulsionizing ether. The subject was one of the greatest practical interest, and had an important bearing on the dietetic treatment of diabetes.

Mr Joseph Bell wished to say a word or two from a surgical point of view. It might be within the recollection of some of the members that a few years ago he ventured to diagnose during life a case of fat embolism after fracture. The patient was a strong man with a comparatively trifling injury, having fallen and broken his thigh-bone. He was drunk when brought in, but no alarming view was taken of his case. In the middle of the night he was attacked by a condition just such as Dr Fraser described in his case, perhaps masked a little by the remains of his alcoholic intoxication. His blood was not examined, but the diagnosis was made of fat embolism connected with fracture. At the post-mortem Dr Hamilton found the blood loaded with fat. On thinking over this case and talking of it with Dr Fraser, the question came to be, what was the theory of the fat in the blood, and how could it be cured? His first theory was, that the medullary cavity of the thigh bone being opened into, and perhaps one or more of the nutrient veins being injured, the fat in that way got into the circulation. This, however, seemed a coarse and almost impossible way of explaining the occurrence. As to treatment, no one seemed to know what should be done. Injections of ether, of which house-surgeons were so fond, had little effect.

Mr Hamilton said that, with regard to the theory that the formation of the fat was due to the diet, all the cases of lipæmia (some four or five) that had come under his notice had been on the diabetic diet, and that the lipæmia had supervened while they were on it. A good deal had been written on this subject lately, and the views of the late Professor Sanders and of himself had been severely criticised. The chief objection seemed to be that many diabetic patients died comatose, without there being any apparent lipæmia in their cases. They all knew that diabetic patients died comatose from various causes. Where the patient suffered from disease of the lungs there was likely to be some dyspnœa and coma, but such a case was not to the point. In all cases of *panting dyspnœa* in diabetic patients coming on suddenly, where the air enters the chest freely but the blood is not oxygenated, he had been satisfied of the lipæmic condition of the blood. He had never made a post-mortem on any case of diabetes, whether dying comatose or not, without feeling the peculiar ethereal odour. In some instances the odour is not perceptible till some time after death. In certain cases it is somewhat acetic ("sour-beer" like, Kussmaul), but after the viscera have been kept twenty-four hours or so, or the blood enclosed in a bottle for a similar time, the ethereal odour becomes so striking that one cannot fail to notice it. The first case in which Mr Hamilton noticed the odour was under Dr Argyll Robertson's care, and it was not detected at the post-mortem examination. The viscera were sent to his laboratory and kept by him for twenty-four hours in a box. On opening the box the odour was so powerful that he remarked to his students that the patient must have been taking chloroform or ether just before death. The odour was due to acetone or some other ethereal substance, but it could not be said that the acetone was the cause of the diabetic coma. Dr Foster's experiments with acetone had been repeated, but the effects did not approach the state of diabetic coma. After a prolonged inhalation the animal might be made half stupid, but never totally unconscious. In two cases Dr Gamgee noted that, although the blood was lipæmic he could not find embola in the lung. Mr Hamilton could hardly conceive that it was possible for the oil to be present to so large an extent in the heart without having also found its way into the lung. He could quite understand that unless the organs were carefully examined the minute particles of oil might be readily passed over. It was only here and there in the preparations shown by Dr Fraser that a large embolon occurred. The greater part of the fat was very finely divided. The capillaries much more commonly contained a mixture of minute oil globules, and precipitated albumen. Given such an amount of a light material floating in the blood, it is a physical impossibility that the circulation could go on for any length of time. It was a well-known fact that in some animals, after a fatty meal, if blood were taken from a vein close to the thoracic duct and allowed to stand, a stratum of oil globules formed on the surface; but this was only a temporary occurrence, and the oil, after passing into the circulation, disappeared in some way as yet unknown. Where, however, there was present for a number of hours so much oily matter as that recorded in Professor Fraser's case, it was a physical impossibility that the circulation could continue. The whole virtue of the circulation was that the greater number of the particles in the blood never touched the vessel walls. If there were present a number of light particles which were pressed against the wall, the friction would soon impede the outflow of the blood to such an extent that the circulation must come to a close in process of time. He therefore held to the original theory of Professor Sanders and himself, that the cause of the dyspnœa in those cases was the obstruction of the circulation by the fat and granular matter in the blood, so increasing the friction that the blood became stagnant. In Dr Fraser's case the fact that there were fat embola in the vessels was visible to the naked eye. They could be seen in some of the larger vessels nearly an inch in length.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING III.

Wednesday, 14*th December* 1881.—Prof. A. R. SIMPSON, *President, in the Chair.*

I. *Dr Croom* showed a FŒTUS in which there were two large cysts situated on either side behind the head, but not communicating with the spinal canal; he thought they might be due to the mesoblast not having united above.

II. *The President* showed the FLUID removed from a cyst situated in the lower portion of the cervix uteri; the patient was a multipara, and had had fifteen previous labours without difficulty—the last two years ago. In this instance the cyst prevented dilatation of the os; it was tapped, and 16 ounces of straw-coloured fluid removed. The fluid contained some albumen and mucous corpuscles.

III. *Dr Milne Chapman* showed two FIBROID POLYPI which he had lately removed from the cervix in different cases. The one was of the shape and size of a small orange, and occupied the upper part of the vagina, being attached just within the cervix by a short pedicle about the thickness of the little finger. It was removed by a snip of the scissors, care being taken to previously secure the uterus with a volsellum, and to have the thermo-cautery ready in case of hæmorrhage, of which, however, there was none. The other was sausage-shaped, and was attached high up in the cervix. The lower end projected through the external os, by which it was constricted. To obviate the necessity of dividing or dilating the neck of the uterus, the mass was partly cut through at the level of the os, and again higher up. In this way room was gained and the pedicle reached. Both patients were, at the time of operation, in a state of extreme anæmia, and both made rapid recoveries. Dr Chapman thought that the difference in shape was due to their different positions. The first one, lying in the vagina, had greater facility for lateral expansion, and hence assumed its globular form. The second, being confined in the canal of the cervix, had, on account of the less resistance to its downward growth, become more elongated.

IV. *Dr Croom* read a paper on FUNIC HÆMORRHAGE DURING LABOUR, which appeared at page 707 of this Journal.

The President said that the Fellows had listened with interest to this paper on one of the rarer complications of labour. He had not seen a case of velamentous insertion of the cord which caused hæmorrhage, nor one where the dispersion of the vessels was so wide as to favour hæmorrhage. They were indebted to Dr Croom for his admirable description of this condition, with its diagnosis and treatment, because such a complication might occur any time.

The theoretical questions raised were of interest. The central implantation of the cord, though the typical one, was the rarest; Hyrtl believed that when this was present the placenta had been developed over the fundus. When central the insertion was perpendicular, but as it approached the margin it became more and more oblique. Whether this increase in obliquity of insertion implied lower situation of the placenta in the uterus (as Hyrtl affirmed), he was not quite sure. It was of practical importance to remember that we may have a velamentous insertion along with low situation of the placenta. He had performed experiments to determine what strain the cord would bear; this varied considerably, from 3 to 10 pounds.

Dr Peter Young had seen three cases of velamentous insertion, in one of which he felt the vessels before delivery. In no case was there hæmorrhage. In one the placenta was low down. As the os was well dilated, the child could have been quickly delivered had hæmorrhage threatened. He questioned whether there was a greater liability of the veins to burst. The veins in the body generally stand a considerably greater strain than the arteries; he did not know whether this was the case with the placental veins. He was not disposed to accept the explanation given of the arrangement of the vessels in a subsidiary placenta. He thought that the distance of the subsidiary lobes increased as the placenta developed. Their formation was due to the development of a placenta on both walls of the uterus. The interval of separation corresponded to the angle of junction of the walls. This angle opened up as pregnancy advanced, and hence the subsidiary lobes became farther removed from the placenta. From the rarity of the condition it escaped notice, and hence they were the more obliged to Dr Croom for drawing attention to it.

Dr Croom thanked the Fellows for their criticism. He agreed with what Dr Young said as to the veins standing a greater strain. The reason, however, for the greater liability to hæmorrhage from them was their dilated form and tortuous course. As to the development of subsidiary placentæ, Dr Young's explanation did not clear up the question why the vessels to a subsidiary placenta took a bow-shaped course. Were Dr Young's explanation correct, the vessels would have a straight course.

V. The REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL for Quarter ending 1st August 1881, by Dr Keiller, which appeared at page 705 of this Journal, was then read.

Dr Craig asked whether there was any causal connexion between delirium tremens and the death of the child.

Dr Young said that alcoholism sometimes induced labour, and might cause congestion in the placental circulation.

Dr Wilson congratulated Dr Keiller on the absence of any maternal deaths during this quarter.

Dr Buist drew attention to the restricted use of ergot. The administration of ergot should not be a routine practice. He did not believe its administration diminished afterpains.

Dr Craig considered it the most reliable means of checking hæmorrhage. A full dose should always be given in the third stage where there was liability to hæmorrhage or a history of former hæmorrhage. He thought its effects in lingering labour were exaggerated.

Dr Croom was in the habit of teaching that ergot should be given systematically in the third stage, and that for three reasons:—it prevented afterpains; it checked hæmorrhage; it favoured involution in soft, flabby women, and thus lessened the tendency to displacements. Its administration hypodermically never produced any harm, and was much more active than when given by the mouth.

Dr Hart thought that its administration before the third stage did harm. He did not give it till the placenta was expelled, as, when given earlier, the uterus contracted on the placenta and sometimes interfered with its expulsion.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

PHARMACOLOGY AND THE CLINICAL USE OF THE FLOWERS OF CONVALLARIA MAJALIS (*Lily of the Valley*).—In May 1880 Professor S. P. Botkin requested me to repeat the investigations of Marmè, Walz, Brandt, and others concerning the physiological effects of the above drug, in order to replenish the gaps left by them in the subject. Besides making experimental investigations, I was especially to try the remedy clinically (in cases of patients suffering from insufficient compensation) in order to determine the clinical indications for its use, and the best mode of administration. Since that time to the present day (December) I have continued my physiological experiments in Professor Botkin's laboratory, and am trying the remedy clinically in St George's Hospital. The following are the results, so far, of my labours:—

A. *Experiments on Frogs.*—Upon introduction of the infusion, the tincture, or extract of the flowers of *Convallaria majalis* into the lymphatic system of the frog, the following results are noticeable:—1. Retardation of the cardiac contractions, with an increase in their energy. 2. Irregularity in the diastole of the ventricle—some of its divisions remaining partially systolic. 3. Complete arrest of the heart-beat, tetanic contraction of the ventricle, and distended throbbing auricle and venous sac. 4. The heart, after assuming this characteristic condition, does not change in response to electrical, mechanical, or chemical irritation, nor upon application of Stannius' ligatures, nor upon division and irritation of the vagi, nor in consequence of destruction of the nerve centres. 5. During the first and second stages of the intoxication the usual effects are obtained by electrical stimulation of the vagi. 6. If the vagi are divided previously to the introduction of the convallaria, or introduction with atropine is first produced, the effects of the convallaria are still the same. 7. If the nerve centres are previously destroyed, a larger dose of convallaria is required to produce the above results. 8. In all these experiments there were no abnormal deviations in the other organs of the muscular or nervous systems.

B. *Experiments on Warm-blooded Animals.*—The same preparations of convallaria were used, with the following results:—1. A sudden retardation of the cardiac contractions, with increase of blood-pressure. 2. After the period of retardation, there follows a strongly pronounced acceleration of the contractions, with still greater increase of blood-pressure. 3. Arrest of the heart-beat, with diminution of blood-pressure. 4. When the vagi are previously divided, the precursory retardation does not take place. 5. If, during the period of acceleration of the contractions the peripheral ends of the vagi are irritated, the usual effect on the heart is not observable, but the following strange circumstance takes place: those variations of pressure which are caused by the breathing movements of the animal, forming a wavy line on the indicator, very suddenly disappear, and remain in abeyance during all the time that the electrode is kept in contact with the nerve. (I am at present engaged on a closer investigation of this circumstance.) 6. In the left and right ventricles there is always found an extravasation of blood under the endocardium.

C. *Clinical Observations.*—I have tried the infusion of *Convallaria majalis* in six cases of cessation of compensation, with the following results:—1. Under its influence (ex. ʒj.–ij. ad colat. f. ℥vj.) the quantity of urine is much increased. 2. At the same time the dropsical exudates are promptly absorbed, and the weight of the patient lessened. 3. The pulse grows fuller, more regular, and in some cases slower: the latter effect is most noticeable in those cases in which a prominent symptom of the interruption of compensation is a cessation of the regulating influence of the nervous system on the heart. 4. The distention of the cavities of the heart is lessened, as well as the congestion of the organs supplied by the lesser and larger cycles of the circulation. 5. This effect is equally manifest whether there be valvular deficiency or a narrowing of the cardiac openings. 6. The remedy does not seem to possess any cumulative properties. 7. The diuresis induced by the remedy continues long after the cessation of its administration. One of the cases of heart disease which I treated with *Convallaria majalis* was complicated with chronic nephritis, but nevertheless the diuretic effect of the remedy was strongly manifested, though not quite in the same degree as in patients with healthy kidneys.—*Therapeutic Gazette*, October 1881.

CURARE IN THE TREATMENT OF EPILEPSY.—Kunze, in his *Lehrbuch der practische Medicin*, recommends curare as one of the most effective remedies against epilepsy, and repeats this recommendation in an urgent manner in the *Deutsche Zeitschrift für practische Medizin*, Jahrg. 1877, p. 81. He has tried the remedy on thirty-five patients, and in nine cases a perfect cure has been the result. The cases reported in detail prove that in the several forms of epilepsy, and also in cases of long duration of the disease, and even when the mental faculties have become considerably impaired under its influence, curare may effect a cure, and may restore in a measure the impaired intelligence. Eddlefsen, induced by these recommendations, has tried the curare treatment in a number of cases of marked epilepsy, because the previous results with bromide of potassium, partly with and partly without atropia, are not so encouraging that they make other means superfluous. He has tried the remedy in the form and dose as recommended by Kunze, but has the solution to be used for the injections previously filtered. He ordered it as follows:—

℞ Curare, . . . 0·5 (8 grains)
Aq. destill., . . 5·0 (ʒj.¼)
Acid hydrochlor, gutt. 1.
M. Digest for twenty-four hours, and then filter.

Of this solution he injects every fifth day one-third, sometimes two-fifths, of the contents of a Pravaz syringe. The injection, as a rule, causes neither much pain nor inflammatory symptoms, neither does it give rise to symptoms of poisoning. As a matter of course, the quality of the drug and the correctness of the preparation must be beyond question. In two cases of hystero-epilepsy the remedy proved unavailing. Among the thirteen cases of genuine epilepsy, most of which should be called severe and old cases, in six there was no improvement, or it was but temporary, as a result of the curare treatment; three cases were perfectly and, from appearance at present writing, permanently cured. In three patients, although there was a complete subsidence of the attacks, there was a considerable abatement of their frequency, in some an interval of several months resulting, and this in cases in which, previous to the curare treatment, several strong attacks took place daily. One case is still under treatment, and good results are expected, judging from observations so far. In almost all cases, before the beginning of this treatment, different anti-epileptic remedies had been used for a long time without satisfactory or permanent results. The author reports the seven favourable cases in detail, from which report we select only the following:—Girl of 10½ years. When seven months old she was seized with convulsions lasting sixteen hours; in her fourth year, after a fall on the back of her head, convulsions supervened, lasting five days. Since beginning of November 1880 almost daily attacks have occurred, on an average two or three attacks occurring daily. Beginning with the aura, complete unconsciousness lasted for ten minutes. 12th November 1880, the curare treatment was begun. Solution, 10 : 0·1, beginning with one-third, increasing up to the whole Pravaz syringeful. After the first injection the attacks became weaker, and finally disappeared. If, after four or five injections, no effect becomes apparent, the author advises the suspension of this treatment (Professor Eddlefsen, *Mittheilungen für den Verein Schleswig-Holsteiner Aerzte*, April 1881; *Ctrlbl. für Klin. Medic.* 1881).—*The Therapeutic Gazette*, December 1881.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Polypapilloma Tropicum (Frambœsia).—Charlouis, a Dutch army medical officer at Samarang, Java, contributes an exhaustive article on this disease to the *Vierteljahresschrift für Dermatologie und Syphilis*, 2 and 3 Heft, 1881. While it is met with among all the various races found there, it seems to affect specially natives. As most of these have or have had frambœsia, nothing can be certainly said as to its hereditary nature, but the same person can pass through it more than once. Fever, commencing with rigors and lasting about fourteen days, ushers in the disease. This is accompanied with severe pain in the joints, which do not swell, but are too tender to bear the least pressure. These pains are not limited to the night, and continue three weeks if untreated. The eruption shows itself about the eighth day. It consists of pinhead-sized papules, with a yellow spot in their centre, scattered indifferently over the body. Later on they acquire a dusky or red areola. Some have described a red macule as the first eruption of yaws, out of which the papules develop. Charlouis could not make these out, and the areola, in his opinion, first appeared when the papules had reached the size of pinheads. Glandular swelling and tenderness accompany the outbreak of the eruption, and hardness and enlargement continue after the disease has disappeared. The papules increase slowly, assume the form of a champagne cork, and bear a horny yellow crust spotted with red; when the crust is removed, the papillary structure, wet with a small quantity of whitish sticky fluid, is displayed. When the tubercle has attained its full development it begins to retrogress; it shrinks, its colour turns more dusky, the crust falls off, and the surface becomes dry and scaly. In course of weeks and months only a dusky spot remains, on which well-defined pits and the distended openings of the hair, sebaceous, and sweat glands are visible. In a year or less even this has vanished, and the skin is normal. Though slight oozing of blood results from touching the tubercles, causing the punctate staining of the crusts, yet when they have lasted a short time, and connective tissue has been formed in the papillæ of the skin, they become very resistant, so that they seldom or never ulcerate. The affected persons continue well in health during the long course of the disease, and rarely on its account place themselves under medical treatment. The author had not met with a fatal case, nor had his colleagues. Charlouis sums up a careful account of the pathological changes by stating that in frambœsia we have a chronic dermatitis, starting from the papillary layer, and spreading, in consequence of consecutive changes, deep into the corium. The hairs are unaffected. He instituted many experiments to prove or disprove its contagiousness, and concludes that—1. Frambœsia is a contagious disease. 2. It is both auto- and hetero-inoculable. 3. It may affect the same person more than once. 4. When those affected were inoculated either with their own or the secretions of others, an ulcer resembling a soft chancre or a fungous tubercle resulted, yet the inoculation did not produce the slightest alteration on the already existing disease. 5. The secretion as well as the blood from a tubercle is contagious, and inoculation of either produces similar results. 6. The virus is a fixed, non-volatile substance, therefore communication can only result from contact with the skin. 7. The product of the tubercles is only contagious while these are increasing or at their height. So soon as these begin to dry up contagion is no longer possible. 8. The incubative stage may continue three to five months. 9. Fever, accompanied by gastric disturbances and pains in the bones, precedes the eruption and persists along with it. 10. If frambœsia has not lasted long, the spot where the virus entered the body can usually be pretty accurately determined, since the nearest gland to that spot is most enlarged. The question of the identity of frambœsia with syphilis has often been raised. Charlouis determined to institute some experiments in order to establish the fact directly that frambœsia is not syphilis. Kauwno, 29, well-nourished, had suffered for four years from frambœsia, and had not been treated previously. Quite able for work. Married for thirteen years. Wife healthy. No children. The eruption of frambœsia in various stages was scattered over his whole body. There was polyadenitis universalis. The glands had attained the size of a pigeon's egg, and showed fluctuation in their centres. On the 3rd May he was inoculated on the right breast with the secretion of a hard chancre, and a hard chancre manifested itself on this spot in the beginning of June. One of the glands of the right axilla was much swollen and very painful. In course of three and a half months a macular, and soon after a papular syphilitic rash appeared over his whole body. He had at the same time the frambœsia tubercles, which underwent no modification in consequence of the outbreak of syphilis. About the same time a man, aged 26, who had been the subject of frambœsia for some time, became affected with hard chancre. He was kept under observation for nine weeks, when a maculo-papular syphilide appeared, with numerous patches on the mouth and round the anus. The best treatment of frambœsia consists in the combined exhibition of mercury and iodide of potassium. Mercurial ointment is applied to the tubercles; and at first thirty grains, then after two days forty-five grains, of iodide are given internally. This treatment cures the patient within from one to two months. Iodide of potassium alone has no effect on the tubercles, though it diminishes the pains in the bones. Besides, iodoform in pills is one of the best remedies against these bone-pains. Each pill contains sixty-five milligrammes (about one grain), and of these five are taken thrice a day.

Biskra Button.—Laveran had opportunities of studying this disease during a stay of several months at Biskra, an oasis in the Sahara, where it is prevalent. It occurs not only in Biskra, but also in the adjoining oases, and is plainly identical with the Aleppo boil. It shows itself as an endemic only in the months of September and October, and continues till December. No new cases appear in January and February. All ages, both sexes, the strong and weak, are liable to it. The eruption affects the face and extremities by preference, sometimes also the trunk. It ordinarily only attacks the same person once, yet may recur. So long as the disease prevails, the least excoriation has a tendency to become Biskra button. At first there is a reddish, painless elevation of the skin the size of a pin's head; the centre of this soon dries, and a brownish crust forms, easily removable. Beneath this there is a small round ulcer. The papules may occur in patches, bearing thick crusts, which are resistent and continue long. The crusts are remarkably dry. When the crusts are removed and the ulcer left alone, a new, less firm crust forms; when dressed, the crust-formation is prevented, and an ulcer of an obstinate character remains, which in the leg is not unlike a varicose ulcer. If the original crust is not disturbed, these eventually fall off, and finally leave no mark. Should, on the contrary, the crust be removed at the beginning of cicatrization, this goes on more slowly, and a permanent scar remains. Lymphangitis, erysipelas, and phlebitis occur as complications. There are no peculiarities in the crusts. Epidermic cells, pus corpuscles, and bacteria are met with; the latter belong to known species, B. punctum. bacillus. catenula. An expectant treatment is the best. Should the crusts be removed or fall off, it is advisable to powder the ulcer with henna, which favours the production of fresh crusts and cicatrization. As regards its pathogenesis, the author holds Weber's view that the disease is contagious and inoculable, and perhaps auto-inoculable. The virus exists in the crusts, but its nature is not established. Carter's opinion as to its parasitic nature is not tenable.—*Annales de Dermatologie et de Syphilis,* tome i. p. 173.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. Milne Chapman, M.B., M.R.C.S.

The Use of Permanent Baths for New-Born Children, by F. Winckel, Dresden (*Centbl. f. Gynäk.*, Nos. 1, 2, and 3, 1882).—The writer describes a bath in which newly-born children may be kept for days on end without the necessity of being removed, and in which they drink and sleep as regularly and as comfortably as they do under ordinary circumstances. By means of a thermometer the attendant sees when warm water requires to be added, or when the water requires changing. The usual temperature he uses is 36°–37° C., and the temperature of the child is ascertained per rectum. In one case where the child's temperature was 38°·25, the water was kept at 35°. "On this child, who before the bath had suffered from great dyspnœa, had some cyanosis, and continually moaned, the effect was of the most striking description. The breathing became regular, the cyanosis disappeared, the child took its nourishment in the bath, and was so kept in life." The cases suitable for this method of treatment are given by the writer as follows:—Weakly, premature children, born between the 28th and 36th week, on account of the greater certainty with which a regular body temperature can be kept up than by the use of such means as are usually employed—wadding, warm flannels, etc. 2. Depression of the child's vital powers, with asphyxia, following hæmorrhage during labour, or from a badly-tied cord. 3. Affections of the skin, as over the nates, genitals, armpits, etc. 4. Rapid wasting of the child from gastro-intestinal catarrh. 5. Diseases of the umbilicus, erysipelas, etc., etc. In one case of atelectasis the lung expanded and the child gained quarter of a pound in weight after having been twenty-four hours in the bath. The writer suggests that the water may be medicated, as with malt, iron, or hyposulphite of soda. He shows that 21 litres of water (the capacity of the bath) at 38° C. falls to 36°·5 in from 25 to 45 minutes, and he proves, both by calculation and observation, that to raise the temperature again to 38° it is necessary to add half a litre of boiling water, at the same time removing a similar quantity. In this way a constant change of water is going on, and by an arrangement at the bottom of the bath the evacuations from the bowels may be from time to time removed, or the whole of the water may be changed if necessary. Several cases with most satisfactory results are carefully and fully recorded, and more observations are promised soon.

The Hot Rectal Douche, J. R. Chadwick, M.D. (*Trans. Amer. Gynecol. Soc.*, vol. v.)—The writer recommends the use of a rectal douche twice a day—first, in inflammatory conditions of the rectum and large intestine, acute or chronic, characterized by pain, backache, etc.; second, for the conditions which follow inflammations of the pelvic organs and of the pelvic peritoneum or cellular tissue, characterized by painful defecation, backache, pain, or burning sensations in the abdomen, etc. The writer argues that by injecting hot water into the rectum instead of into the vagina a greater surface of peritoneum and of pelvic organs is reached; and he points out that it is not by the removal of scybala that his results have been attained. The method employed is: Water is taken at as high a temperature as can be borne by the hand (110° F.); the patient is placed on her side, preferably the right, in bed; a fountain syringe holding two quarts is employed, suspended quite low, so that the flow of water may be slow. As soon as the patient has a sensation of a desire to defecate, or the rectum is felt by the finger in the vagina to be distended, the current of water is arrested for a few minutes without the removal of the nozzle from the anus. In this way two quarts may usually be introduced without exciting peristaltic action. The water is to be retained as long as possible, but the patient must not resist too much the expulsive action of the intestine.

THE INDICATIONS FOR THE PRODUCTION OF ABORTION, AND THE METHOD OF OPERATION, J. Ahlfeld (*Archiv für Gynäk.*, Bd. xviii. Hft. 2).—After discussing at length the limits of and the necessities for the operation, the writer details the cases in which he has operated. He recommends the use of tents with rounded ends, used till the membranes project into the cervix, so that the ovum may be expelled entire, as usually happens in ordinary abortions. He says, however, that puncture of the membranes may have to be fallen back upon. This method, when accompanied by the use of disinfecting injections, he holds to be the safest.

A NEW METHOD OF TREATMENT FOR DYSMENORRHŒA AND STERILITY DEPENDENT ON CERVICAL STENOSIS, F. Ahlfeld (*Ibid.*) —The method consists in the use of perforated vulcanite stems, with an oval enlargement at the end, varying in diameter from 4 to 8 mm., and named accordingly. The degree of the stenosis is measured by means of Schultze's sound, and a stem with a slightly larger end is forced through a few days before the onset of the menstruation, and left till it is expelled, or for three days. Larger sizes are then used. The writer, speaking from an experience of 100 cases so treated, recommends the method warmly, both as being most efficacious and free from danger.

INTRAUTERINE TREATMENT, by A. Martin, Berlin (*Zeitsch. f. Geb. ü. Gynäk.*, Bd. vii. Hft. 1).—The writer first considers the various methods for rendering the cervix permeable. He dismisses sponge and tupelo tents, the one for their danger, the other on account of their limited sphere of expansion. Ebell's and Barnes's dilating bags he mentions as useful but cumbersome. After mentioning the various other methods employed, he recommends that of Schroeder, which consists in splitting the vaginal portion of the cervix and then forcing from above or pulling down the uterus over the finger, and subsequently sewing up the wound made. He holds in reserve the use of tangle tents for cases where there is, along with narrowing of the canal, great hardening of the tissues. He does not, however, consider dilatation of the cervix indispensable previous to making intrauterine applications or performing curetting in the majority of cases. For hæmorrhagic endometritis, profuse menstruation following abortion, and some cases of dysmenorrhœa membranacea, he recommends that the uterus be pulled down with a volsellum, and a steel curette used, after which the cavity is to be washed out with a 1½ per cent. carbolic lotion, and a little perchloride of iron injected. He has treated over 300 cases in this way, and in 94 per cent. with good result. He relates three perforations of the uterus, in none of which any harm ensued. He recommends curetting in all cases of disease of the uterine mucous membrane, whether associated with a previous pregnancy or not.

SOME EFFECTS OF AN OVERLOADED COLON IN THE PUERPERAL STATE, by J. H. Emerson, M.D. (*N. Y. Med. Jour. and Obstet. Review,* Jan. 1881).—After detailing a case attended by himself and Professor Lusk, the writer says regarding it:—The points worthy of attention are, (1) the occurrence of tolerably high fever with considerable prostration in a puerperal woman, which proved to be due to an overloaded colon; (2) the impracticability of satisfying one's self of the existence of this condition by palpation and percussion under the circumstances present, viz , the pregnant condition at first, and, later, the tympanites; (3) the probable influence of the distended colon in precipitating labour, as the child was evidently immature.

DIVISION OF THE SYMPHYSIS PUBIS, Morisani, Naples (*Annales de Gynécologie,* Dec. 1881).—The writer records 50 cases performed in Naples during 1868–80, with the following results:—40 women saved, 10 deaths; 41 children living, 9 dead. The operation was performed during labour, and often after other measures had been tried. The antero-posterior diameters of the pelves varied from 61 to 81 mm., but the usual limit he puts at 67 mm. The writer strongly advocates premature delivery in cases where the contraction of the pelvis is known of. The only operation, he says, which can be put against division of the symphysis is embryotomy; and taking cases of this latter operation performed by Tibone of Turin and Chiara of Milan, he states that they had a maternal mortality of 21 and 24 per cent. respectively, and, of course, a fœtal mortality of 100. He then describes the operation.

ON THE PAIN IN PELVIC CANCER, AND ITS RELIEF BY MORPHIA, by F. H. Champneys, St Bartholomew's Hospital (Reprint from vol. xxii. of the *Trans. of the Obst. Soc., Lond.*)—This paper is a careful study and analysis of 50 consecutive cases occurring under Dr Matthews Duncan's care in St Bartholomew's Hospital. In the first part of the paper the clinical features are classed together, and numerous tables are given, which we would require to repeat *in extenso* to give any idea of the results. In the second part the efficacy of morphia, as administered in various methods, is considered in a similar way. The quantities employed were—subcutaneously, gr. $\frac{1}{6}$; per rectum, gr. $\frac{1}{2}$; by the mouth, gr. $\frac{1}{12}$ (of the hydrochlorate). "There can be no doubt that the hypodermic injection did this (gave relief) most effectually; but as it cannot be safely entrusted to the patient, the other methods can be tried, and the injection kept in reserve. In spite of the fact that the morphia suppository is applied to the very neighbourhood of the disease, it was decidedly less effective than morphia given by the mouth, and very much less so than morphia injected subcutaneously."

CASES.

Double Atresia of the Vagina (at the Hymen and at a point higher up); retention of menses; operation; continuous irrigation for six days; recovery. Dr Rennert.—*Centbl. f. Gynäk.*, No. 3, 1882.

Three Fatal Cases of Rupture of the Uterus, with Laparotomy. Howard. —*Trans. of Amer. Gynæc. Soc.*, vol. v.

Fleshy Tumour of Umbilicus, with Patent Urachus. J. G. French.—*Lancet*, Jan. 14, 1882.

A Complicated Midwifery Case; epileptic fits; inversion of the uterus; recovery. G. C. Searle.—*Brit. Med. Jour.*, Jan. 28, 1882.

Cyst in the Anterior Wall of the Vagina formed from Gärtner's Duct, Watts.—*New York Med. Jour.*, Dec. 1881, p. 623.

Hypospadias simulating Hermaphrodism: a History of Two Cases, with Remarks. Bradfield and Reichert.—*Ibid.*, Jan. 1882. (The two patients, brothers, reached the ages of 22 and 27 respectively before it was discovered that they belonged to the male sex.)

Notes of 113 Cases of Operation for Laceration of the Cervix. Goodell.—*Amer. Jour. of Obstet.*, Jan. 1882.

Two Cases of Hydrocele in the Female. Earnest.—*Ibid.*

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S.E.

SYPHILIS OF THE LUNG.—The *British Medical Journal*, February 4, 1882, in a leading article, reviews a work on this subject by Dr Pancritius, a general practitioner in Berlin. In contending for the comparative frequency of syphilitic affections of the respiratory system, the author of this work does not profess to have discovered an unusual number of syphilitic patients who had gummatous nodules (or cavities resulting therefrom) in their lungs. On the other hand, the syphilitic affection of the lung which he wishes to emphasise is an interstitial pneumonia, an induration of the connective tissue following the track of the bronchial and pulmonary arteries for a certain distance from the hilus of the organ into its interior. It is essentially an affection of the middle region of the lung, and the affection is not one of the air-cells, but solely of the supporting connective tissue of the organ. The physical signs are found mostly in the interval between the base of the scapula and the vertebral column; they are nothing uncommon, being more or less diminished percussion resonance, weakened respiratory murmur, and especially weakened or altogether absent expiratory murmur, and those variously extended or added to in intensity. There are records of 110 cases of the disease from his private practice. It is worthy of note that the primary sore in 43 per cent. of the cases was of the non-indurated variety. [The last statement tends to throw doubt on the conclusions to be drawn from the observations of Dr Pancritius. We consider syphilis of the lung a much rarer disease than it is supposed to be by this author, and we never before heard of constitutional syphilis being preceded by non-indurated sores in such an enormous percentage.]

BROMINE TOPICALLY IN CHANCROIDS AND CHRONIC ULCERS.—In the *American Practitioner*, November 1881, Dr J. L. Robinson describes this form of treatment. Within the past few months he had opportunity of testing bromine as a local application to chancroids and chronic ulcers associated with syphilis. The following is the formula used:—Bromine, one part; water, three parts; bromide of potash, *q. s.* to make a solution. To be applied once daily by means of a mop made of cotton wool. He had also used the bromine in several cases where, after the operation of circumcision, inoculation of the entire raw surface had occurred, with equally good, even with better results, than in the leg-ulcers.

THE ACTION OF MERCURY IN SYPHILIS.—In concluding an elaborate paper on this subject (*Medical Record*, November 5, 1881) Dr Bronson says:—Is the point established that mercury is a reconstituent tonic? The fact cannot be gainsaid that mercury in small doses is capable of increasing the bodily weight and the number of the red blood-globules. But does that make it a tonic? Has it been established that it promotes the processes of assimilation, or are we sure that the added weight is evidence of better health? The products that entitle iron to its reputation as a tonic—the heightened vigour, the elevated animal temperature, the augmented excretion of urea, are wanting. The accumulated fat betrays a sluggish metamorphosis, a lessened oxidation; the vital movement is retarded. The effect of mercury in syphilis is to check the tendency to hyperplastic cell-growth. It does this by imparting to the cells some quality which restrains their morbid activity and predisposes them to retrograde metamorphosis, Compared with the fruits of a grave or malignant form of syphilis. the dangers that attend the prolonged use of mercury may be insignificant. There are many cases of syphilis, however, where we cannot afford to entirely ignore these lesser dangers of the cure, which may possibly become worse than those of the disease.

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery during the February sittings of the examiners, and were admitted L.R.C.P. Ed., and L.R.C.S. Ed.:—Hamilton Meikle, Alabama; Joseph Balfe, Dublin; Augustus William Thomas, Swaffham; George Reginald Eakins, County Tyrone; John Burdon, County Durham; Joseph Hysanth Tynan, Edgeworthstown; Walter Spencer, Yorkshire; Francis Woore, Guernsey; William Robert Allen, County Antrim; William Pennefather Warren, Queenstown; Thomas Galland C. Hesk, Derbyshire; Arthur Edward Blacker, Somersetshire; George Wiston Baker, London; George Arthur Patrick, Bolton; Frederick Anastasius Saunders, London; Marcus William Alattson Keane, Whitby, Yorkshire; John Fitzgerald Burke, Ennis; Joseph Wallace Duncan, Donegal; Alfred Ellison Muncaster, Manchester; Adam Robert Hamilton Oakley, Highgate; George Dobson Crowther, Yorkshire; Arthur Edward Cecil Spence, Allahabad; Henry Ralph Gatley, Park, near Truro; George Jukes, Cumberland; Thomas Wyld Pairman, Biggar; Thomas Aitchison, Northumberland; George Savage Martin Baxter, Brighton; William Patrick Kirwan, Galway; Henry Hele Bate, Swansea.

We notice that in London efforts are being made to supply the hospitals with suitable ambulance conveyances, and that many medical men and others are interesting themselves in the movement. Through the generosity of Mr Crossman, the vice-chairman of the London Hospital, that institution has already been furnished with an ambulance waggon on plans supplied by Dr Howard of New York. In Liverpool Mr Reginald Harrison is moving in a similar direction. We hope that in our own city public generosity will not be behindhand, and that ere long our Royal Infirmary will be supplied with a conveyance which can be used in cases of accident. A properly constructed wagon would save a great deal of suffering to those poor men who receive severe railway injuries, and have to be conveyed in carts or cabs to the Infirmary.

Dr De F. Willard, in the *Philadelphia Medical Times*, Nov. 1880, describes a splint for enabling patients suffering from morbus coxae to take exercise. It consists of two portions, made of leather, which surround the pelvis and thigh respectively. These are strengthened by two branching steel arms, which are connected by a joint permitting considerable motion. The leather is put on damp and moulded to the parts, or plaster casts are taken of the pelvic and thigh regions, on which the splint is moulded. The idea seems a good one, and likely to be practically useful.

OBITUARY.

SIR ROBERT CHRISTISON, Bart., M.D., LL.D., D.C.L.

Within the period of a few years it has been our mournful task to record the death of Syme, Simpson, Bennett, Laycock, Andrew Wood, and Sanders. Christison, a contemporary of these representatives and upholders of the medical fame of Edinburgh during a brilliant stage in its history, remained with us to form, as it were, a link in the chain which united the present with the past generation. This link has now at last been severed, and the present generation has lost the direct connexion with a past generation which Christison's latter life so powerfully represented.

For upwards of half a century he had occupied a prominent position in his profession and in the scientific and social life of Edinburgh. As a teacher and as a writer on medical and scientific subjects his name was so widely known, that it may truly be asserted that wherever the English language is spoken deep regret will be felt for the loss of one who to so many has been a beloved and respected teacher, and to all a representative of the highest eminence in practical and scientific medicine. His strongly-marked individuality, presenting always a model of uprightness and nobility of character, has exerted an influence which it is impossible to exaggerate in elevating the tone of his profession much beyond the limits within which his personal example could be directly felt. In his native city his sage and influential counsel had to the last been actively exerted in favour of those interests to which his life was devoted; and his fellow-citizens had become so accustomed to the strongly-knit, elastic figure, which until recently was daily present before them, that the loss will never be forgotten by the present generation.

Robert Christison was born in Edinburgh on the 18th of July 1797. His father, Mr Alexander Christison, was for several years Professor of Humanity in the University, and he has left a reputation for great scholarly and scientific attainments, high personal character, and enthusiastic admiration for the heroes of his classical studies. Under his judicious direction young Christison received his early education at the High School, from which he proceeded, at the early but at that time by no means unusual age of fourteen, to the Arts classes of the University. Having spent four years in the study of literature and natural and physical science, he became a student of medicine, although his first intention appears to have been to adopt the profession of an engineer. At the end of his second year of medical study a fortunate chance placed him in the position of Resident Assistant in the Royal Infirmary—first in the medical, and afterwards in the surgical wards; and he thus for two and a half years enjoyed unrivalled opportunities for acquiring a familiarity with practical medicine and surgery. His attention, however, was not restricted to these subjects. The sciences accessory to medicine had from the first attracted his interest, and he devoted to some of them, and especially to botany and chemistry, such time as he could spare from his other occupations. In the latter science, opportunities for practical study in the University could scarcely be said to exist; and it is significant of his self-reliant energy that, along with a few fellow-students,—among whom were Edward Turner, afterwards Professor of Chemistry in University College, London, and James Syme, destined in future years to co-operate so powerfully with Christison in extending the reputation of the Medical Faculty of the University,—he instituted a self-educating class, in which the experiments from day to day exhibited by Dr Charles Hope, the professor of chemistry, were repeated and varied. The experiences of this class formed for Christison a happy recollection. He not unfrequently, even in the last years of his life, recounted the difficulties which had to be surmounted, and the accidents, often of a farcical description, which resulted from these experiments, and in which Syme occasionally figured in a prominent manner.

After graduating as Doctor of Medicine, in 1819, Dr Christison was led by a desire to extend his knowledge to proceed to London, where he attached himself for several months to St Bartholomew's Hospital. The unusual facilities that then existed in Paris for acquiring a theoretical and practical knowledge of chemistry induced him afterwards to proceed to that city. He there worked with great diligence in the laboratory of Robiquet, attending also the lectures of Vauquelin and Thenard on chemistry, of Guy-Lussac on physics, and of Orfila on toxicology. In connexion with his subsequent work and reputation as a pharmacist, it is interesting to note that he was a frequent visitor at the French Institute when Pelletier and Caventou announced their numerous discoveries on the then novel subject of the chemical composition of vegetable substances, and especially on the separation and characters of the alkaloids.

While he was in Paris, the death of Dr Gregory led to a readjustment in the occupancy of some of the medical chairs in Edinburgh, and to a vacancy in that of Medical Jurisprudence. Dr Christison was proposed by his friends as a candidate, and after a keen competition he received the appointment. Though only twenty-five years of age, and a graduate of not more than two and a half years' standing, his education and acquirements eminently fitted him for this office. He had already gained much experience of disease, he had received a thorough training in practical chemistry, and he had acquired the most recent information in toxicology from its most distinguished exponent. He entered upon his new duties with an earnestness which was a marked feature in his character, and soon entirely justified the wisdom of his selection. From 1822 to 1832 he retained this appointment, and in this period of ten years he succeeded in raising the number of his class from twelve to ninety students, in reducing to order and precision much that was confused and indeterminate in the teaching of Medical Jurisprudence, in adding by his investigations new departments to this many-sided subject, and in gaining for himself a reputation which afterwards placed him in the first position in this country as a medical jurist.

This reputation was also very materially founded upon his *Treatise on Poisons*, the first edition of which was published in 1829, and was followed by other three editions, of which the last appeared in 1845. This treatise has been characterized by the highest legal authority in Scotland as "a book which was received at once by physicians and jurists and men of science as the most philosophical and complete work that had yet been published on the subject." It soon assumed an authoritative position in the literature of medical jurisprudence, and it still retains the position of a generally recognised standard for reference. The advance of knowledge has necessarily rendered many of the statements it contains of less value and importance now than at the time of, and for many years after, its publication; but it will ever remain a conspicuous evidence of the author's power of systematizing existing knowledge, of educing principles from judiciously considered facts, acquired with much industry from a wide range of medical literature and from laborious personal observations, and of stating in terse and lucid language the results of original experiments and the details of chemical processes.

A professor of medical jurisprudence with such high qualifications naturally received much employment in the law courts. Dr Christison's first case is said to have been the notorious one of Burke and Hare, and in the course of time his advice was sought for and his evidence engaged in probably every important trial in Scotland involving matter of medical opinion. His evidence was given impartially, and stated in unmistakable language; he avoided the great temptation of acting as a partisan; and as every statement he made had been deliberately considered, the cross-examination of opposing counsel rarely affected his evidence.

After he had occupied the Chair of Medical Jurisprudence for ten years, Dr Christison was transferred, in 1832, to that of Materia Medica, which had become vacant by the death of Dr Andrew Duncan. The present generation of his pupils can associate him as a teacher only with this subject, as his connexion with the University as professor terminated when he resigned the Chair of Materia Medica in 1877. During this long incumbency of forty-five years, Dr Christison gained for himself a reputation in Materia Medica at least equal to that he had gained in Medical Jurisprudence. The former subject presents some analogy to the latter in embracing several subsidiary departments or sciences. The existing knowledge in these departments, or the preferences of the individual, naturally influence the attention that is bestowed on any department. Both circumstances operated in giving a distinctive character to Dr Christison's teaching and work. He was a trained chemist, and the chemical and pharmaceutical consideration of medicinal agents formed for him a strong attraction. By his careful and exact work in this department, and his wisdom in early appreciating the value of the discovery of the vegetable alkaloids, of which he had heard much from the lips of Pelletier and Caventou, the pioneers in this field of research, he acquired the reputation of being the first pharmaceutical chemist in this country. He had for years engaged in toxicological researches, and the symptoms produced by poisonous doses of the more active of the articles in the Materia Medica were carefully observed and described by him. His experience in practical medicine and as a clinical teacher led to his enunciating with great detail the more obvious effects that followed the administration of remedies in disease, and to his classifying these effects in elaborate categories. These distinctive characters were conspicuous in his lectures, and they have been stereotyped in the famous *Dispensatory* he published in 1842. This publication ably represented the advancements which had been made in chemistry, pharmacy, and therapeutics since the time of the last edition of the *Edinburgh New Dispensatory* of Dr Christison's predecessor, Dr Andrew Duncan, and it more than maintained the reputation of the University of Edinburgh as a school of Materia Medica which the latter publication had been so instrumental in founding. It possessed all the excellences of precise and lucid exposition, of judicious generalization, and of the application of original observations in rendering statements more definite and in enlarging the boundaries of previous existing knowledge, which form so marked features of Dr Christison's treatise on poisons. In the descriptions of physiological action the methods of research prevalent at the time are ably reflected. Trained in a school of which Orfila was the most prominent representative, and whose methods and aims had not been markedly affected by the conceptions of physiological action which the genius of Majendie and Claude Bernard had introduced, and which were afterwards destined to revolutionize pharmacology, Dr Christison, in the earlier part of his work as a teacher of materia medica, bestowed the greater part of his attention to the chemical and pharmaceutical subdivisions of his subject, and to the toxicological rather than the ultimate physiological effects of remedies. It was his merit, however, to have fully recognised the value of the new departure which the investigation of the action of remedies on individual functions and structures had given to the most important subdivision of his subject. At the public dinner in celebration of his fiftieth anniversary as a professor in the University he expressed the opinion that "therapeutic physiology is a splendid and still little-trodden field, without the cultivation of which we shall never make any material advances in the knowledge of the actions of remedies and their real uses in disease;" and he expressed the same opinion, in nearly the same terms, in his evidence before the Scottish University Commission several years subsequently. To his powerful advocacy may be attributed the investigations in pharmacology undertaken by many of his pupils, and the fact that they were the first in this country to enter on this field of research.

In all his scientific work he exhibited a special aptitude for experimental investigation. In chemistry, pharmacy, and toxicology his researches were numerous, and distinguished by great accuracy. He was an extremely orderly and neat worker, and displayed much ingenuity in devising apparatus, some of which still exists in the Materia Medica laboratory of the University, and illustrates well his manipulative dexterity and fertility of resource. In his researches on the effects of poisonous and medicinal substances he showed how thoroughly he appreciated the necessity for experiments on animals; and when, in after years, sentimental agitation threatened to obstruct the progress of knowledge, he unhesitatingly opposed all legislative interference which had for its necessary consequence the preventing of research in the only direction in which advancement could be achieved. An able argument in defence of the experimental method in toxicology, which it is hoped may yet be published, was read by him to the writer of this notice only a few weeks before his death, and he then discussed with much interest the means which should be adopted to counteract the pernicious effects of the Act relating to experiments on the lower animals.

In connexion with his work in Materia Medica, Dr Christison rendered invaluable service in the preparation of the last edition of the *Edinburgh Pharmacopœia*, and in acting as chairman of the committee of the General Medical Council charged with the difficult task of harmonizing the Pharmacopœias of England, Scotland, and Ireland into a national codex. The valuable museum which he so industriously collected is probably surpassed in this country only by the museum of the Pharmaceutical Society of Great Britain; and it awaits removal to its nearly finished new abode in the University New Buildings before its treasures can be properly displayed.

Previously to Dr Christison's appointment to the Chair of Materia Medica, he had for several years fulfilled the duties of a visiting physician to the Royal Infirmary. In 1832 he became a clinical professor, and it is a singular testimony of his devotion to science that he entered upon his duty with the intention of devoting all his time and energy to the study of the effects of medicinal substances in disease, and, in this sense, of making his Infirmary work subsidiary to the study of therapeutics. This intention, however, was not destined to be entirely fulfilled, and it is impossible to predict how important might have been the results if concentrated effort on a favourite subject could have been permitted him for a sufficiently extended period. The great success of the Medical Faculty of the University produced a condition of things which brought this great success to an end. Students had resorted to Edinburgh from England, Ireland, and America, and, by filling the class-rooms, had provided a sufficient income for the professors to enable some of them to devote their time entirely to University duties. In the course of time these students became the teachers in medical schools, and performed the work so efficiently that the classes in the University of Edinburgh diminished in numbers, and the emoluments of the professors became seriously reduced. In these circumstances Dr Christison found it necessary to engage in practice in order to be relieved from all pecuniary difficulty, and, to his great disappointment, his original intention had to be abandoned. Gradually he acquired a leading position as a physician, though it was not until he was nearly fifty years of age that his time was so engrossed by consultation practice that he found it necessary to withdraw himself from hospital teaching. In the interval he had achieved a great reputation as a physician, chiefly by his writings on "Granular Degeneration of the Kidneys," published in 1838, on fevers, on scurvy, and on many other medical topics, which generally appeared in the *Edinburgh Medical Journal*, a periodical of which he was for several years the editor. On the death of Dr Alison his practice as a physician became the largest and most lucrative in Scotland, and it was not until he was seventy years of age that he finally withdrew from it.

A protracted, though happily only temporary, illness led him, in 1877, to resign the Chair of Materia Medica, and so to terminate a career as a professor in the University of fifty-five years' duration, forty-five years of which had been spent in the teaching of Materia Medica. Even this statement falls short in adequately representing Sir Robert Christison's important services to the University of Edinburgh. His business habits, his decision of character, and his familiarity with the affairs of the University, rendered him one of the most valuable and influential of the members of its senate. While still a junior professor, he acted as Dean of his Faculty; for many years, he guided the financial arrangements of the University; from 1858 until the time of his death, he served as a member of the University Court; and on several occasions he gave important assistance to commissions and committees appointed to inquire into University affairs. It will be recollected with melancholy interest that his last public appearances were directly connected with those interests his long life had been so closely identified with. A few months before his death he attended an important meeting of the University Court; and on another very recent occasion, when his health was already impaired, he took an active part, as member of a deputation, in urging upon the Scottish representatives of the Government the necessity for appointing an executive commission to bring to a practical issue the work of the Universities' Commission of 1876. He entered with great activity into the proposal for building the New Royal Infirmary, and took a leading part in adjusting the details of its construction. When the yearly increasing number of students in the medical classes indicated the necessity for an extension of the University buildings, his powerful co-operation aided in realizing the gigantic scheme, which affords a reasonable expectation that the Medical Faculty may enter upon a career even surpassing in usefulness and prosperity its present unexampled success. He early sounded the alarm when the proposal was mooted to convert the universities of Scotland into mere schools for teaching, and to transfer their ancient right of conferring degrees to a central examining board; and under his championship the danger was for a time warded off.

Notwithstanding his multifarious occupations, Christison never forgot that the students of the University had claims upon him which were not limited by the intercourse of the class-room. He was peculiarly a man to win the affection and respect of ingenuous youth. Nature had endowed him with the physical qualities of an active and well-proportioned frame, which, under well-ordered exercise, to the last retained the elasticity of youth. Tradition associated with him the exploits of an athlete. Personal intercourse revealed, under a somewhat reserved demeanour, a kind and sympathizing disposition, and a character free from petty jealousy, and possessing the attributes of an honourable and chivalrous gentleman. While he still remained a professor his influence and popularity with the students were probably unequalled. No one could more perfectly maintain order in an assemblage containing disturbing elements; and no one succeeded in restoring order in a noisy meeting, or in quelling riotous outbreaks, such as those which in former years signalized the occurrence of snow-storms, more effectively than the Professor of Materia Medica. He was elected by admiring students to the office of patron or president of nearly all their clubs and societies; he was for many years the popular captain of their Volunteer company; and whenever his active interest was gained for any scheme in which the students were concerned, as in the inauguration and support of the Musical Society, success became insured. His relation to the students could not be more emphatically attested than by the fact that after he had resigned his professor's position his influence with succeeding generations of students — which could have been founded on reputation only—remained as great as with the students who knew him as professor. His appearance among the former was always the signal for an ovation; and very recently a large section of them enthusiastically supported him for the office of Lord Rector, when, against his recommendation, political feelings were unfortunately imported into the contest.

The unexampled services which Christison rendered to his University, and which naturally followed the faithful fulfilment by a man of exceptional powers and activity of an early-formed resolution to make his University office his "main and primary object," met with grateful acknowledgment. While yet a professor, his bust was placed in the hall of the University, and the equally unprecedented honour of the degree of LL.D. was conferred upon him by his University, which required that a standing order prohibiting this degree from being conferred upon a member of Senate, should be set aside. On the occasion of the fiftieth anniversary of his induction as professor, a banquet was given in his honour, at which the most eminent representatives of science, literature, and the learned professions, and the most respected citizens of his native city, paid homage and offered their congratulations to the veteran Professor. On the same occasion there were presented to him an address from graduates of the Edinburgh University residing in London, and a sword of honour from the members of his Volunteer Rifle Company.

It is equally gratifying to find that his long life of usefulness brought to him honours and distinctions from many other quarters. His professional and scientific fame extended far beyond his native country. His name was a familiar one among the members of the medical profession in every civilized country, and he was enrolled as an honorary member in a large number of foreign scientific and medical societies, including the Academy of Medicine of Paris. At home, professional and scientific honours were abundantly bestowed upon him. He was elected on two occasions, in 1838 and 1846, President of the Royal College of Physicians of Edinburgh; and by a unanimous resolution of the College his portrait was placed in their hall, notwithstanding the fact that he was at the time opposed to the majority of the College in some matters of medical politics. He was selected by the Crown in 1858 to represent the medical profession of Scotland in the General Medical Council, and from 1858 till 1873 he exercised a great influence in the deliberations of that important body. The University of Oxford in 1868 acknowledged his merits by conferring upon him the honorary degree of D.C.L. Upon the death of Sir David Brewster he was elected President of the Royal Society of Edinburgh, "the highest scientific office in Scotland;" and after he had occupied this position from 1868 to 1873, the Society emphasized its appreciation of his scientific merits by placing his portrait in their gallery. The esteem with which he was regarded by the medical profession in this country was shown by his election to the Presidentship of the British Medical Association when that body met in Edinburgh, in the year 1875; and he inaugurated his office by a masterly address on medical education and licensing, in which he emphatically declared himself against the "one-portal" system. For many years he held the office of Physician in Ordinary to the Queen in Scotland; and in 1871 he received the highest distinction which in this country is accorded to a member of his profession, when, on the recommendation of Mr Gladstone, a baronetcy was conferred upon him. He regarded this honour with special gratification. To quote from his speech at the banquet in celebration of the fiftieth anniversary of his induction as a professor:—"Few, perhaps, are aware of the peculiarity of the honour thus conferred on me. My name has not been a family name until now in any part of Scotland. There is reason to suppose that my first progenitor in Scotland was one of those piratical rogues who long ago used to come across from Scandinavia to plunder this land. . . . The honour recently bestowed upon me by Her Majesty is peculiarly gratifying, inasmuch as I am able to say that for the first time the name of Christison has become the name of a family."

Sir Robert Christison's services were not, however, restricted to the interests of science and medicine. He was an active and leading citizen of Edinburgh, and he co-operated heartily in many schemes originated for the purpose of improving the social and material condition of his fellow-men. The improvement of the amenity of his native city, the securing for it of a pure water supply, and the management of the affairs of its noble charity, the Royal Infirmary, received a large share of his attention. He acted as President of the Sanitary Association from its foundation, and he was a prominent member of the Society for the Prevention of the Pollution of Streams.

He has frequently been described as a strong partisan in politics. His leanings were undoubtedly in favour of an enlightened Conservatism; but many of the proceedings of Tory Governments failed to receive his sympathy or approval. During the greater part of his life, indeed, while holding his own views on important questions of State policy, he refrained from taking any active share in politics,—the disingenuousness so often associated with political discussion being repugnant to his singularly just and honourable mind. When he felt bound, as a matter of duty, to take an active share in political contests, he did not hesitate to state his views unreservedly and fully, but he regarded the duty as an unpleasant one, and he unwillingly performed it.

In his books and numerous minor publications Sir Robert Christison displayed much literary skill. He had a wide familiarity with the classical writings of ancient and modern authors, and in private life he delighted to quote illustrative passages from favourite poets. He was an effective speaker, and, although trusting more to argument and reason in enforcing his views, when roused by opposition or by the interest of his subject, he exhibited the fervour of an orator.

His fondness for athletic exercises has already been referred to. We have Dr Acland's testimony that so late in his life as in the autumn of 1870 he still retained much of his youthful endurance. To quote Dr Acland's words, "As a member of the Royal Sanitary Commission, I was in need of the wise counsel of my colleague, and came to Scotland to seek an interview. I found him at Lochgoilhead. . . . Next day he decided—mind, he was over threescore years and ten—to walk me up Ben Ihm. He beat me hollow. As we went he discoursed on everything we saw, 'from the cedar of Lebanon to the hyssop that grows on the wall;' everything was as his familiar friend. When we reached the summit, a pocket sextant was produced; measurements were to be taken of disputed Ordnance distances from Mull and from Eig, round the Paps of Jura, down to Ailsa Craig. It was bitterly cold, but he stayed to perform gymnastic exercises in mental arithmetic, upon sines and upon angles. We then descended, discussing every geological question, Plutonic or Neptunian, Huttonian or Wernerian, till we reached home again. Next day, happily for the Southron, it was wet and stormy, so that no other height could be attempted. I had often sat before him in the class-room; now I was to sit behind him as number three in a four-oar to his stroke; . . . he led us miles down the loch and back again as a refresher before dinner, and as a prelude to a long evening's work on the details of a stiff sanitary memorandum, afterwards published in the Sanitary Report." His last indulgence in the favourite pastime of mountain climbing was in 1876, when he ascended Ben Voirlich, although then eighty years of age.

In the subsequent years of his life he retained sufficient strength, notwithstanding occasional disablements from ill-health, to continue to a moderate extent the walking exercise he was so fond of, limiting his expeditions, however, to level ground. After his return from last year's autumn holiday at Ballachulish, the encroachments of advancing years were manifest to his friends, although little impairment of his mental faculties could be detected. Shortly before Christmas he became so feeble as to be compelled to keep his bed; and the advance of feebleness and the occurrence of dyspeptic symptoms excited the apprehensions of his sons, and produced in his own mind a foreboding that the end was approaching. This foreboding was strengthened, and perhaps even originated, by the discovery, first made by himself, of a tumour in the abdomen, which gradually advancing emaciation, resulting from loss of appetite and difficulty in retaining food, soon rendered easy of detection. On Monday, the 23rd of January, he lapsed into a state of unconsciousness, in which condition he remained until death occurred, a few minutes before six o'clock on the morning of Friday, the 27th of January.

Sir Robert Christison was a member of the Church of Scotland, and had long been attached as an elder to the kirk-session of St George's Established Church. He was married in 1827 to Henrietta Sophia, daughter of Mr David Brown of Greenknowe, Stirlingshire. Mrs Christison died in 1849, but there survive three sons. The eldest, Alexander, who has succeeded to the baronetcy, was born in 1828, and is now Surgeon-General of the North-West Provinces and Oudh, with the rank in the Bengal Army of Deputy Surgeon-General; the second, David, was born in 1830, and is an M.D. of Edinburgh; and the third, John, was born in 1832, and is a Writer to the Signet, and the energetic and able Secretary of the Edinburgh University Court.

The wide-spread feeling of regret which Sir Robert Christison's death occasioned was manifested in the generally-expressed desire that an opportunity should be given to the chief public bodies in Edinburgh and to his numerous admirers to accompany his remains to their last resting place. The funeral took place on Wednesday, the 1st of February. The Court, Senate, General Council, and students of the University; the Town Council of Edinburgh; the Royal Colleges of Physicans and Surgeons; the University Rifle Volunteer Company; deputations from several of the Scottish Universities, and from all the important societies and public bodies of Edinburgh; representatives of the London Edinburgh University Club; and an immense gathering of private friends—all joined in testifying their esteem for the veteran professor and citizen; and the route followed by the mournful procession, from St George's Church to the New Calton Burying-Ground, was lined by crowds of sympathizing onlookers.

The last event was a fitting termination to a career of unexampled duration in signal services to mankind. T. R. F.

No man who once saw Sir Robert Christison could ever mistake him for any one else. His nature was homogeneous, and curiously consistent. As a physician, though he might not have all the suavity and expressive kindliness of the elder and younger Begbies, nor the—shall we call it?—the mesmeric power of the huge-brained and anomalous Simpson; nor that instant fixture of reliance which Syme's eyes, more even than his words, gave and kept; nor the penetrating look, as of a warlock, of Dr John Scott, he had much of the best that they had not in such quantity—he had the *momentum* of a strong, clear, well-knowledged mind, determined on doing its best for his patient's good, and that best well worth its name, and, once confided in, he was so for ever. To have such a command of all known drugs, he was singularly simple in his medicines and general treatment. As a lecturer he was, for the subjects he treated, we may say perfect, full of immediate knowledge as distinguished from mediate, orderly in its arrangement, lucid in its exposition rather, perhaps, than luminous, for it did not need that—strong and impressive in its application. His life-long friend Mr Syme was sometimes more luminous than lucid, though always full of power over the thought of others, quickening it and making what he said unforgetable. That great, amorphous genius, John Goodsir, was often largely luminous and sometimes sparingly lucid.

In his experiments Christison was exquisite, and never failed, unlike his excellent and gifted predecessor, Dr Andrew Duncan, junr., whom some of us elders may remember setting agoing a process at the beginning of the hour, telling us (unluckily) what we would see, and then casting, all through the lecture, furtive, and at last desperate and almost beseeching glances at the obdurate bottle, till at the close he, with a sad smile, said, "Gentlemen, the failure of this experiment proves more than its success!"

The bent of Christison's mind was scientific and positive rather than philosophic, speculative, or presaging. He was more occupied with what is, than with why it is, or what it may become, and in this region he did his proper work excellently, with a clear decision and thoroughness.

He had the natural qualities of a great soldier, and was full of martial ardour and sense. He has sometimes been called distant and cold. He had great natural dignity, and was not of an effusive turn, being warmer inside than out, which is better than the reverse; but that he had tender and deep feelings, as well as strong energy and will, the following circumstance may well show. It refers to what, if said in his lifetime, would have brought a flush of displeasure on that noble face. His wife, a woman of great beauty, and better, was in her last long illness. She was going to the country for a month, and her husband heard her give orders that a piece of worsted work which she had finished should be *grounded* and made up as an ottoman, and ready in the drawing-room on her return. A few days before that, he asked if it was completed; it had been totally forgotten. He said nothing; but, getting possession of the piece, he sat up for two or three nights and *grounded* it with his own hand, had it made up, and set his wife down on it, as she had wished. Is not that beautiful?—a true, manly tenderness, worth much and worth remembering: "Out of the strong comes forth sweetness." His love of Nature, from her flowers to her precipices and mountains, and his pursuit of her into her wildest fastnesses, "haunted him like a passion," increasing with his years. His Highland residences during the latter part of his life gave him great delight, and fed his intrepid, keen, searching spirit. He never saw a big mountain but he heard it, as it were, saying to him, "Come on—and up;" and on and up he went, scaling the tragic *Cobbler* and many else. He had a genius for nice handiwork, and took pains with everything he did. The beauty and minuteness of his penmanship we all know; he might, as Thackeray said of himself, have turned an honest penny by writing the Lord's Prayer on the size of a sixpence.

But we must end, though half has not been said. We, his old friends, can never forget him, or hope ever to see his like again.

J. B.

DR JAMES BALFOUR KIRK OF BATHGATE.

THE name of Kirk of Bathgate is one of the most familiar and respected in the long roll of country medical men, who do what is often wrongly called the rough work of the profession in the gentlest way, and who often unite the amount of experience and knowledge which in the large towns is distributed over many specialists. The country man has to be physician, surgeon, and obstetrician at once, and often does the threefold work for one-third of the pay enjoyed by his town brother.

James Balfour Kirk was born on the 6th of December 1826 at Cairneyhill, near Dunfermline, and, after a boyhood of hard work and many difficulties nobly overcome, graduated in 1847 as M.D. Edinburgh, when not yet 21 years of age, and next day, with very few pounds in his pocket, married Miss Jessie Arthur, eldest daughter of the late Mr John Arthur, who was for so many years the trusted assistant of the late Professor Goodsir. All who knew Dr Kirk knew what a wise and fortunate marriage it was, and what a happy home he had for five-and-thirty years.

After a year at Lanark Dr Kirk settled at Bathgate; in 1851 was appointed Medical Officer to the Parochial Board, and has ever since been one of the chief figures, not only in the town, but in the whole country side. Of commanding presence, bold, honest, and outspoken, a most loving friend, and most considerate, attentive, and truly courteous practitioner, it is no wonder that he was loved and trusted, and that his funeral was said to be the largest ever seen in Bathgate. Oddities and brusqueries of speech and manner he had, but of affectation, humbug, or hypocrisy he was absolutely free. Simple as a child, with a child's love of fun and laughter, he had the warmest heart, and was in every sense of the word one of the ablest and readiest practitioners we have ever met.

Few cases puzzled him, and no difficulty or emergency was too much for him. One was sure that if a telegram came from Kirk it was not for nonsense, and there was sure to be an operation, probably a difficult and uncommon one, else he would have done it himself, and done it well, too—for his immense physical strength did not prevent him from being exact and accurate in his work. He was a splendid assistant, and a most fearless and admirable chloroformist. One remarkable faculty he had in perfection—absolute control over his patients. They delivered themselves absolutely into his hands, and what he advised to be done, was done without a murmur.

He had a very large and exhausting practice, and never spared himself. About twelve years ago he very nearly died of intra-pelvic suppuration, complicated with most alarming cerebral and cardiac symptoms. The suppuration recurred occasionally, but with less severity. About a fortnight before his death he had been overworked, but stuck to his post till, when he last left his carriage, he could hardly walk to his room. Abscesses in ischio-rectal fossa, attended with intense pain, constant vomiting, and eventually culminating in an attack of jaundice, ended in his death on Sunday morning, the 5th of February. He was buried on Thursday the 9th.

Dr Kirk is survived by his widow, one daughter, and three sons, —the eldest of whom, Dr Robert Kirk, will succeed him in his practice.

Part First.

ORIGINAL COMMUNICATIONS.

Article I.—*A Critical Review of the Post-Mortem Signs of Drowning.* By Francis Ogston, Jun., M.D., Assistant to the Professor of Medical Jurisprudence, and Teacher of Practical Toxicology, in the University of Aberdeen.

The frequency with which cases of drowning occur in the practice of medical jurists renders it of importance from time to time to pass under review, in the light of experience, the various post-mortem signs which indicate this form of death.

This paper has as its basis the cases, 170 in number, which have been met with in Aberdeen and its immediate neighbourhood during a number of years. Of these, however, only 130 were examined internally. Many other cases have been omitted for the sake of clearness, where, from advanced decomposition or other causes, the signs of drowning were not well marked, or were mixed with those of other fatal injuries.

The generally-received signs of drowning are shortly these:—

External Signs.—General pallor of the surface of the body, with bright rosy-red patches on the face and front of the neck chiefly, sometimes on other situations. Cutis anserina on the outer aspect of the thighs and arms and about the top of the sternum. A blanched and corrugated condition of the skin of the hands, wrists, feet, and ankles, and not infrequently of the front of the knees and back of the elbows. This state of the hands may be accompanied by what has been termed the "cholera hand," where venous congestion shining through the bleached cuticle gives the hand a bluish appearance, like that observed in persons suffering from cholera. A white watery froth, like the lather of soap, at the mouth and nostrils, generally found when the body is seen in a fresh state and soon after its removal from the water; or a red bloody froth at these parts when the body is decomposed. Water, sometimes mixed with froth, which flows from the mouth in quantity when the body is turned face downwards. The tongue may be protruded beyond or pressed against and marked by the teeth. The penis may be erect, semi-erect, or retracted, and the scrotum shrunk and wrinkled. Sand or weeds may be found under the nails, or grasped in the clenched hands. Excoriations are not infrequently observed about the knuckles, or erosions on the hands, face, ears, etc., caused by fish or other animals in the water after death. Injuries of various kinds, cuts, bruises, evidently inflicted before death, which may complicate the diagnosis, may not infrequently be found.

Internal Signs.—Water in the air-passages, lungs, œsophagus, stomach, and watery fluid in the pleural and peritoneal cavities. White watery froth in the mouth, throat, air-passages, and lungs, perhaps also in the stomach. Sand, etc., in these situations. Bulkiness or protrusion of the lungs, and over-distention or rupture of their superficial air-cells. Fluidity of the blood in the heart. Redness of the trachea and gullet. In conjunction with these, the usual signs of asphyxia, namely, more blood in the right than in the left cavities of the heart; congestion of the lungs, liver, spleen, and kidneys; perhaps, also, congestion of the brain and the blood-vessels within the skull.

On considering the *external* signs, we find very little to guide us to a decision as to the cause of death, the only ones which we can utilize being (1) the water which flows, generally in abundance, from the mouth on turning the body face downwards; and (2) the froth at the lips and nostrils. With regard to the former of these, though hitherto little noticed, it would seem to be one of great utility, as, except in the event of the person having drunk largely of water before immersion, it could hardly mislead; and even allowing such a hypothesis, the amount which often pours out is such as no one would have been likely to swallow within a short time; the water, too, may be salt, and perhaps even mixed with sand, seaweed, etc. Though stated at 14·1 per cent. of the cases quoted, it ought really to have been placed in a much higher ratio, since it was only lately that it was noted in our post mortem records; in the cases, 26 in all, in which it was looked for, it failed in two where decomposition was pretty well advanced.

On the latter, also, much reliance may be placed, as, when the body is seen soon after removal from the water, and if the face has not been wiped, it will seldom fail. We must, however, discriminate between the white and the red froth, for the former is a sign found in fresh bodies, and the latter in those advanced in putrefaction, and is not confined to the bodies of the drowned.

The white froth was seen in 20 per cent. at the lips and in 12·9 per cent. at the nostrils; but, like the first sign, these ratios must be taken with this qualification, that, had the bodies been seen earlier, the froth would probably have been found in nearly every case.

As to the red froth observed at the lips in 4·1 per cent., and at the nostrils in 8·2 per cent., when it is present in any quantity, when on compressing the chest more issues out mixed with water, and when the bubbles are small, it may have some importance; but, as a rule, it is not to be trusted to *per se.*

These, then, might be classed as so far reliable signs of drowning —that is to say, that when they are found well marked we may be justified in stating that the person had probably been drowned.

The signs which follow, on the other hand, can only be used as strengthening these when they are present. Of those, perhaps the most important is the bleaching and corrugation of the hands and feet (seen in 82·9 per cent.), and of the knees and elbows (in 26·4 per cent.) The objection which has been urged against this sign, that it may be produced by soaking the body in water after death, or even by surrounding the hands, etc., with damp cloths, would hardly weigh much against it, however, unless wounds of a fatal nature coexisted; but any suspicion of poison having been used might be damaging to its value. The above remarks apply with equal strength to the appearance known as the cholera hand, which, besides, occurs too rarely to be of much use. It was seen in only 7 per cent. of the cases.

By some medical jurists it is stated that the pallor of the skin is a marked feature in the bodies of the drowned. It was noted in 39·4 per cent., but this sign has but little value. The skin, especially over the face and front of the chest, is frequently observed to be of a rosy-red colour, sometimes giving the corpse a singularly life-like appearance; but this could hardly be of much value, as it is also observed in other cases—as in death by cold carbonic oxide poisoning, etc. It may, however, have some little value. It was noted in 52·9 per cent. of the cases. Of considerable value, as indicating that the person has been deprived of life while the circulatory and nervous functions were in full activity, the existence of cutis anserina may assist us in determining that the death had been sudden and unnatural; but as it is also seen in death from other violent causes—such as hanging—we cannot allow it to be a sign of death by drowning in a strict sense. It occurred in 62·3 per cent.

The finding of sand, etc., underneath the nails is of little value except in so far as it may determine the locality where the body got into the water.

The protrusion of the tongue, or its being pressed against and marked by the teeth, is merely a sign common to most forms of death by asphyxia.

With regard to the condition of the penis much dispute has arisen, Caspar having regarded the state of retraction as diagnostic of drowning. But here he is at variance with other medical jurists, who regard semi-erection as the usual state. In the 72 cases where its appearance was noted, semi-erection was found in 58·3 per cent., retraction in 23·6 per cent., and erection in 16·6 per cent. It would appear, then, that semi-erection is the most usual appearance. The sign, however, seems not to be of much real importance.

The last three appearances noticed in the subjoined table are merely inserted here as showing the ratio in which such injuries may be looked for in a given number of cases, and because they have been brought forward by some authors as occurring in the drowned. They can in no sense, however, be regarded as signs of drowning.

It would thus appear that from a mere view of the body of a person suspected to have been drowned we should hardly be justified in certifying that drowning was the cause of his death, but that we should formulate some such opinion as this—that the signs observed were not incompatible with the supposition that he had died by drowning.

TABLE I.

External Signs of Drowning in 170 *Cases.*

	Number of times observed.	Ratio per cent.
Special Appearances.		
Water, sometimes frothy, flowing from the mouth on turning the body, ...	24	14·1
White froth at the lips, ...	34	20·0
„ „ nostrils, ...	22	12·9
Red froth at the lips, ...	7	4·1
„ „ nostrils, ...	14	8·2
Auxiliary Appearances.		
Bleaching, etc., of the hands and feet, . . .	141	82·9
„ „ knees and elbows, . .	45	26·4
Cholera hand, ...	12	7·0
Pallor of surface of the body, ...	67	39·4
Rosy patches, ...	90	52·9
Cutis anserina, ...	106	62·3
Sand under nails, ...	5	2·9
Protrusion, etc., of tongue, ...	29	17·0
Erection of the penis, in 72 cases . .	13	16·6
Semi-erection „ where it was . .	42	58·3
Retraction „ noted. . .	17	23·6
Occasional Appearances.		
Excoriations on prominent parts, . . .	16	9·4
Erosions (post-mortem)	31	18·2
Injuries (various, ante-mortem), . . .	10	5·8

In studying the *internal* signs of drowning, while trusting again to the presence of water and froth in the body as our chief indication, we are assisted by the occasional presence in the respiratory tract of foreign substances, such as sand, seaweed, etc.; by the fluidity of the blood; and by the usual signs of asphyxia.

We have to look primarily for water in the respiratory tract; secondarily, in those cavities bordering on the lungs, especially when the body has lain in water for some time; and, thirdly, in the digestive tract or its surrounding cavities.

Since water is drawn into the body with each attempt at inspiration, we naturally expect to find it in the air-passages and lungs. In the former it was found in 65·3 per cent., and in the latter in 77·6 per cent. In the pleural and pericardial cavities it occurred in notable quantity in 48 and 16·9 per cent. respectively, the fluid being sometimes almost colourless water, sometimes bloody, but always unmistakably the product of exosmosis from the œdematous lungs.

Since we know that drowning persons swallow water, which fills the mouth in the act of inspiration under water, we look with confidence for it in the œsophagus and stomach to assist our diagnosis. It was observed in the œsophagus in 14·6 per cent., and in the stomach in 74·6 per cent. of the cases; while in bodies examined after a prolonged stay in water it was found in the peritoneal cavity in 12·3 per cent., having soaked through the walls of the stomach.

From the presence of white, watery froth in abundant quantity in the air-passages and lungs, and in a minor degree in the œsophagus and stomach, we derive much trustworthy information second only to that conveyed by the presence of water in these situations. This froth was found in the air-passages in 66·9 per cent.; in the minute bronchi and air-cells of the lungs in 15·3 per cent.; in the mouth in 18·4 per cent.; in the œsophagus in 15·3 per cent.; and in the stomach in 3 per cent. of the bodies inspected.

A note of caution is here necessary with regard to the froth in the drowned, as many of our writers on legal medicine have fallen into the unpardonable error of describing it as *mucous froth.* A very slight examination will suffice to dissipate this error. On taking a little upon the point of the knife and touching the bubbles with a needle, they may be easily made to collapse, leaving only watery fluid, while if any trace of mucus were present it would then betray itself by the stringy residue which would be found along with the water. This has been repeatedly demonstrated in the presence of colleagues and students at the post-mortem examination of bodies of drowned persons.

It may be objected that froth in the lungs is found in bodies of those who have died otherwise than by drowning, and that this is true cannot be denied, as in cases of acute œdema of the lungs, and also in those of children who have died by smothering, this froth—*i.e.*, white watery froth—is a prominent appearance; but on closer examination this objection falls to the ground, as it is never found in such a great quantity in any form of death as in that by drowning, in the former cases the froth *oozing* out of the small and large bronchi, in the latter *pouring* out from every cut surface of the lungs.

When foreign substances, sand, seaweed, etc., are found along with water and froth in the air-passages and lungs, they serve to strengthen these proofs, especially when they are compared with the products of the locality in which the corpse is found. They rarely occur, however (see Table II.)

As a curiosity, it has been noted that white froth (in 3·8 per cent.) and sand (in 0·7 per cent.) were met with in the pleural cavities. These had evidently escaped from ruptured superficial air-cells of the lungs.

To over-distention and perhaps rupture of the superficial air-cells of the lungs have been assigned a certain value ; but apart from the more important œdema they have slight significance, though taken in conjunction with it they may be of a little assistance. The former was noted in 7·6 and the latter in 4·6 of the cases.

The same remarks apply to the two signs next in order in Table II., namely, bulkiness and protrusion of the lungs, which are seen on removing the sternum. Bulkiness was noticed in 31·6, and protrusion in 6·9 per cent. It should be said, however, that when the lungs protruded from the chest on its being opened, water or watery fluid in some, often great, quantity was found in the pleural cavities, and that the protrusion was caused by the still buoyant lungs floating on its surface when the controlling pressure of the sternum was removed.

As a sign of somewhat doubtful trustworthiness, the entire fluidity of the blood in the heart has been much discussed. This was encountered in 55·3 per cent. of the inspections ; while dark loose clots were seen in 27·6, and yellow (fibrinous) clots in 3 per cent. Thus it would seem that a certain amount of confidence may be reposed on this appearance, and that we should not be justified in neglecting it altogether.

Since, in the great majority of instances, persons who are drowned die by asphyxia, we naturally expect to find the appearances proper to this mode of death in the bodies of those we examine. Of these, engorgement of the right heart was noted in 79·2 per cent., congestion of the lungs in 81·5 per cent., and of the liver, spleen, and kidneys in 82·3 per cent. of the cases inspected. These signs, however, can only be regarded as auxiliary factors which, in conjunction with the special signs, may aid our conclusions.

Redness of the trachea and gullet may be included among the signs of asphyxia, though some medical jurists have been inclined to class it as a special sign of drowning. It is of slight value under whichever category it is placed. It was noted in the trachea in only 18·4 per cent., and in the gullet in 5·3 per cent. It is perhaps hardly necessary to state that this redness is distinct from that of hypostasis in being found in the non-dependent as well as the dependent parts of these tubes.

While in the majority of instances the signs of asphyxia are, or have been, assumed to be the most striking appearances in the drowned, those of syncope are not of very rare occurrence, while those of coma would seem to be observable oftener than many authors allow. Thus the blood was found in equal quantity in the lateral cavities of the heart in 13 per cent. of the cases—a most characteristic sign of syncope,—as also pallor of the brain and meninges in 4·6 per cent.; while, on the other hand, well-marked congestion of the brain and the bloodvessels of its membranes was found in 55·3 per cent. of the cases—a sign met with in death by coma. In such cases, however, these appearances were frequently mixed with those of asphyxia to a greater or less degree.

I must, however, guard myself against the assumption of regarding this meningeal and cerebral congestion as a sign purely applicable to death by coma, for in many cases, perhaps the majority, of death by smothering in infants, where the appearances of asphyxia in the lungs, liver, etc., are well marked, we find also unmistakable congestion of the brain and the bloodvessels of the head. This is a fact which appears to require further elucidation, the statement frequently made that infants in most cases die in a convulsion being an assertion, not the explanation of a phenomenon.

Taken in conjunction with this congestion within the head, what is perhaps a further development of the same condition was met with in 7·6 of the cases, namely a layer of clotted blood more or less thick on the inner surface of the scalp.

As against Tardieu's opinion that punctiform ecchymoses are a reliable sign of death by smothering, it has been urged that these are not infrequently seen in other forms of death. This is so far true, as may be seen in the subjoined table (II.), but they are the exception and not the rule, as they are in smothering; and besides, as has been shown by my father in his *Lectures on Medical Jurisprudence,* they are few, not grouped, and comparatively large in drowning, hanging, etc., while in smothering they are numerous, grouped, and almost invariably very minute, often looking as if the lung had been dusted with cayenne pepper.

As assisting somewhat in the determination of the suicidal or accidental nature of the drowning, and as also in some measure helping to account for the congestion within the head, the odour of alcohol sometimes observed within the body is interesting. Alcoholic odours were distinctly perceived in the fluids within the skull in 7·6 per cent., the heart in 0·7 per cent., and the stomach in 3 per cent.

TABLE II.

Internal Signs of Drowning in 130 *Cases.*

	Number of times observed.	Ratio per cent.
Special Appearances.		
Water in the air-passages,	85	65·3
„ minute bronchi and air-cells of lungs,	101	77·6
„ œsophagus,	19	14·6
„ stomach,	97	74·6
„ pleural cavities,	63	48·0
„ pericardium,	22	16·9
„ peritoneal cavity,	16	12·3
White watery froth in the mouth,	24	18·4
„ „ air-passages,	87	66·9
„ „ minute bronchi and air-cells of the lungs,	21	15·3
„ „ œsophagus,	21	15·3
„ „ stomach,	4	3·0
„ „ pleural cavities,	5	3·8
Sand in the air-passages,	10	7·6
„ minute bronchi and air-cells of the lungs,	2	1·6
„ œsophagus,	1	0·7
„ stomach,	2	1·6
„ pleural cavities,	1	0·7
Sea-weed in the larynx,	1	0·7
„ mouth,	1	0·7
Over-distention of the superficial air-cells of the lungs,	10	7·6
Rupture „ „	6	4·6
Bulkiness of the lungs,	48	31·6
Protrusion „	9	6·9
Entire fluidity of blood in the heart,	72	55·3
Partially clotted state „	36	27·6
Yellow (fibrinous) blood-clot „	4	3·0
Auxiliary Appearances.		
Blood in greatest amount in right heart,	103	79·2
„ equal quantity in each side of the heart,	17	13·0
Congestion of the lungs,	106	81·5
„ liver, spleen, and kidneys,	107	82·3
Redness of the trachea,	24	18·4
„ gullet,	7	5·3
Congestion of the brain and its bloodvessels,	72	55·3
Pallor of the brain,	6	4·6
Occasional Appearances.		
A layer of clotted blood under the scalp,	10	7·6
Punctiform ecchymoses, „	7	5·3
„ „ under the pleural covering of the lungs,	9	6·9
„ „ on the surface of the heart,	3	2·3
„ „ „ „ spleen,	2	1·6
„ „ „ „ kidneys,	1	0·7
Alcoholic odour of the blood in the brain,	10	7·6
„ „ heart,	1	0·7
„ „ stomach,	4	3·0

The conclusions derivable from all this would seem to be that—

1. When an external examination of the body only is allowed, if abundance of water pours from the mouth on turning the corpse face downwards, and if white watery froth is found at the mouth and nostrils, or if it may be made to issue from them on compressing the chest, we may be justified in giving an opinion as to the probability of drowning, especially when the accessory signs, viz., rosy redness of the face and front of the chest, gooseskin, and bleaching and corrugation of the hands, are well marked, presuming always that no lethal injuries are seen on the body which would appear to have been inflicted before death, and no traces of corrosive action, etc., from poisons be observable about the lips, hands, clothes, etc.; but that to justify us in giving a more positive opinion we ought to have furnished to us a detailed account of the locality in which, and the circumstances under which the body was observed before its removal to the place where it lies for examination.

2. That where a complete inspection of the body is permitted, we may give a more positive opinion when, in addition to the external appearances, water in marked quantity, mixed with white watery froth, is found in the lungs and stomach, and also, perhaps, when a large quantity of watery fluid is seen in the pleural cavities; when sand, seaweed, etc., is found in the bronchi, or even in the trachea; when the lungs are bulky or protrude on the removal of the sternum; and when the blood within the heart is wholly fluid,—especially when with these signs we find marked appearances of asphyxia in the heart, lungs, liver, etc.

ARTICLE II.—*Dystocia from Exomphalos of the Fœtus.* By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh; President of the Obstetrical Society, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society, 8th February* 1882.)

FŒTUSES have from time to time been exhibited to the Society, affected with the malformation which has been variously designated Exomphalos, Omphalocele, Eventration, Umbilical or Abdominal Hernia, and Ectopia viscerum abdominalium. There has occurred an arrest in the development of such a fœtus, so that the normal closure of the ventral aperture around the root of the umbilical cord has been prevented, and some of the abdominal viscera protrude through the umbilicus into a sac of varying dimensions, the walls of which are furnished by the funic structures.

In the simplest cases a single intestinal loop or diverticulum is found within the sac. Where the arrest of development has begun earlier the aperture is larger, and the coils of the small intestines may have become herniated almost *en masse.* Not infrequently, when the fissuring affects more the upper part of the abdominal wall, the liver is the structure chiefly herniated. In the cases where the abdominal walls are more defective, the whole of the abdominal viscera may be projected into the hernial pouch.

The exhibition of such specimens has sometimes led to conversation on various points of interest concerning them.[1] But as the mode of their birth does not seem to have formed a subject of discussion, I take the opportunity of the production in the extern practice of the Royal Maternity and Simpson Memorial Hospital of the exomphalic fœtus which I exhibited on 11th January, 1st, to record the history of the case as it has been drawn up by the house surgeon, Mr John Waugh, M.B.; and 2nd, to offer some remarks on the influence on parturition of such monstrosities.

CASE.

Mrs T., aged 33, ix.-para, residing at Vallance's Entry, Canongate, was confined on 19th December 1881.

Menstruation began at age of 14; type, 28-day; duration, 3 to 4 days; quantity moderate; date of last menstruation, 3rd to 6th May; *stirrage* never felt. Condition during pregnancy fairly good; her health was not so robust as formerly. No complications of pregnancy.

Previous Obstetric History.—Her eight previous labours were all easy, the first the longest, lasting 12 hours; they occurred in the years '66, '68, '70, '72, '74, '76, '78, '80; of the children, four were male, four female—all born alive and healthy.

Labour on 19th December. Pains began at 2.30 A.M.; they were tonic in character, intermission being incomplete; a constant severe pain persisted in the right iliac fossa till 10 A.M., at which hour she sent to the Maternity for aid. At every pain there was a discharge of blood from the vagina. The student who attended sent on his arrival for the house surgeon, who came about 12 noon. The general appearance of the patient was then found to be healthy, her pulse good, no signs of exhaustion. Inspection of the abdomen showed nothing abnormal; the abdominal walls were thick, and palpation difficult.

Height of Fundus was about midway between umbilicus and ensiform cartilage. The position of the fœtal parts could not be ascertained by palpation. No fœtal heart could be heard. On vaginal examination the os uteri was found dilated to the size of a florin, membranes ruptured, and the presenting part felt like a bunch of small grapes protruding through the os. The pains were few and weak. There was evidence of the escape of perhaps a

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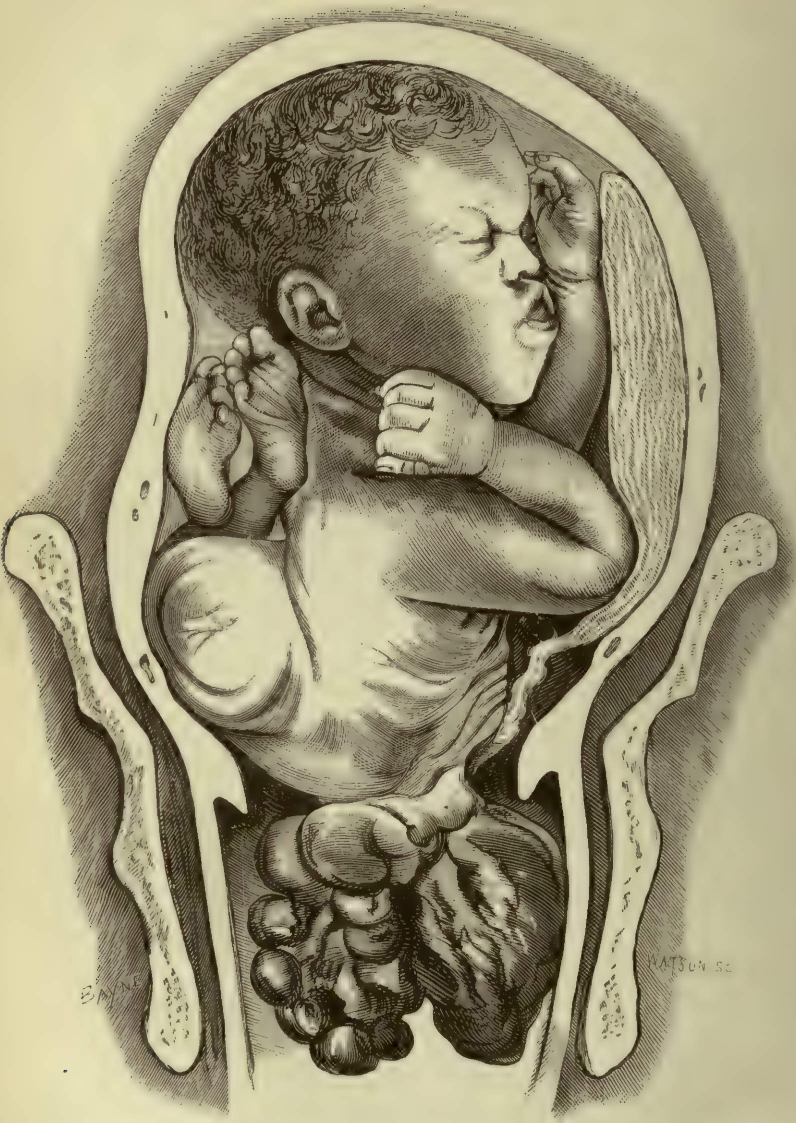
[1] *Edinburgh Medical Journal*, xiii. 473, 1867, etc.



Exomphalic Fœtus.

few ounces of blood; the discharge, after the arrival of the house surgeon, amounted to not more than one or two teaspoonfuls. The pains gradually died away after three o'clock, by which time the originally presenting part—which was thought at first to be the placenta or a portion of a hydatidiform ovum, but which turned out to be intestines and the other abdominal viscera—had been expelled from the uterus and lay *en masse* in the vagina. The purplish-red bowel was pulled down and demonstrated at the vulva. Two half-drachm doses of liquid extract of ergot were given, but failed to induce renewal of the uterine contractions.

Patient's general condition being good, and there being no hæmorrhage, she was left in charge of nurses till 7 P.M., when Dr Hart, having introduced the whole hand into the vagina, was able to touch, high up, the ribs and axilla of the fœtus. Professor Simpson saw the case about 9 P.M.; and chloroform having been administered, he turned and delivered, traction and expression being combined. The placenta was expressed immediately after the head of the fœtus. The uterus contracted well, and there was no hæmorrhage. Two hours after delivery the pulse was 90. The puerperium was normal in every respect.

The Fellows of the Society have already had an opportunity of seeing, when it was still fresh, the deformed product of this parturition. In this drawing (see Fig.) I have got the artist to represent the fœtus and placenta in the relation in which they were found during labour. The section of the uterus and pelvis is imaginary: the drawing of the fœtus is *ad naturam*, and shows the exact appearance of it two days after birth. It is seen in the habit or attitude in which it was found *in utero*, and which it permanently maintains. The body is bent backwards and slightly to the left side, so that the feet lie in the nape of the neck under the occiput, which is thrown backwards. The ventral aperture is widely patulous from the thorax to the floor of the pelvis. The viscera, which should have been accommodated in an abdomino-pelvic cavity, are thrown forward so as to lie in a pouch outside of the trunk, the walls of which are formed from the membranes of the ovum. These are in immediate apposition with the fœtal surface of the placenta, and carry the umbilical vessels along the left side in a corded form, which, in the accompanying sketch, as in nature, has the appearance of a straight piece of funis. The pelvic organs are specially undeveloped, the only trace of sexual apparatus being a rudimentary ovary on the right side. The left kidney is absent; the right is small and slightly hydronephrotic. The diaphragm is dragged down, and the heart, which seems to consist of only a single auricle and ventricle, lies below the tip of the ensiform cartilage. The pelvis is open in front, and a hygroma the size of an orange is seen on its posterior aspect. When this is cut into it is found to communicate with the sacral canal through an opening admitting the tip of the little finger.

REMARKS.

I do not propose to enter on a discussion as to the mode in which this malformation is produced. The morbid influence must clearly have begun to bear on the fœtus at a very early stage of its development, perhaps from the fourth to the seventh week. The theory suggested independently by Chadwick[1] and Ahlfeld,[2] that the umbilical vesicle and its pedicle are primarily at fault, and prevent closure of the ventral fissure by dragging out the abdominal viscera, makes the nearest approach to a satisfactory solution of the genesis of such cases.

The chief interest that it has for us as obstetricians is the influence which this special malformation exerts on the process of parturition. Now, of course, there are cases of exomphalos—the slighter cases of congenital umbilical hernia, which are not very rare, and which are associated with no modification in the attitude and presentation of the fœtus or of the course of the labour.

Again, there are cases where there is ectopia to a greater degree of the abdominal viscera. The attitude of the fœtus, however, is not affected; only, as in a case recorded by Koltsch,[3] it may cause some delay and difficulty in the extraction of the fœtus.

But in the group of cases to which our fœtus belongs the malformation is more pronounced. It has begun at an earlier stage of development: the closure of the ventral fissure is less complete, and it is associated with other disturbances of configuration which lead to—

1. *Peculiarity in the Attitude of the Fœtus.*—Of these concomitant disturbances of development the most important is the twist in the spinal column. The fœtus in all these cases, like the one figured by Vrolik,[4] instead of being incurved on its abdominal aspect, is recurved so that the head and the heels are brought into intimate relation with each other. Whether this be due or not to the dragging exerted upon the bodies of the dorsal and lumbar vertebræ by the ectopic viscera, the result of this reversal of the ordinary incurvation of the fœtus is—

2. *Peculiarity in the Presentation.*—We know that the presentation of the fœtus is due to the adaptation of the contained ovoid body to the containing ovoid uterus. In the variety of malformation we are considering, the broad end of the fœtal ovoid is found in the extended head, which fits into the broad upper part of the uterine ovoid; and the narrow end is represented by the soft projecting ventral mass which lies in the lower segment of the uterus, and thus comes to present during labour. If in other instances, as in that which I have recorded now, there be a faulty implanta-

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[1] *Transactions of the American Gynecological Society*, i. 364, 1876.

[2] *Archiv für Gynækologie*, xi. 85, 1877.

[3] *Monatsschrift für Geburtskunde*, x. 13, 1857.

[4] *Tabulæ ad illustrandam Embryogenesin*, t. xxii.

tion of the placenta, then the tendency to prævial implantation will operate still further in the way of determining the presentation of the omphalocele. For a feature common to most of them is the absence or imperfect development of the umbilical cord, so that the hernial sac is in immediate apposition with the placenta; and if the placenta be developed close to the os, the hernial mass will be first felt when the orifice dilates. Out of fourteen cases of which I find any note regarding the presentation, there are only two cases of head presentation, Dr Breschet's[1] and Dr Chadwick's,[2] and in the latter the child is said to have presented with "the head and one foot." In all the others[3] the exploring finger first touched the displaced abdominal viscera. Klein seems to have been the first to take note of this peculiarity in the presentation of the exomphalic fœtus. "It is not unworthy of remark," he says, "that children in whom a portion of the pelvis, of the lower extremities, and of the abdominal parietes is awanting, present in general, *not with the head*, but with the protruded bowels, and, if I may so express myself, with the stump of the belly; whilst precisely in such cases one would rather expect that the much heavier head and thorax must have sunk lowest." So it should on the gravitation theory, but that is now well known not to hold good. Hence—

3. *Peculiarity of Diagnosis.*—When, as in the case I have related, there occurs an early escape of blood, it is easy to understand that when the patient is first examined she should be supposed to be the subject of placenta prævia. Dr Atthill and Dr Horace M. Brown both state that when they found the fœtal viscera descending through the vagina their impression was that the uterus must be torn and permitting of the escape of the mother's bowels. After the cervical canal is sufficiently dilated to admit the hand the diagnosis is easy. The intestinal loops and the liver have their own distinctive feel, and the ribs are easily recognisable just beyond.

4. *Mode of Delivery.*—There is a marked tendency in these cases to premature delivery. In two of the cases (Chadwick and

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[1] *Medico-Chirurgical Transactions*, ix. 433, 1818.

[2] *Loc. cit.*, p. 379.

[3] KLEIN, in *Meckel's Archiv für die Physiologie*, iii. 391, 1817. He cites, also, cases of Fried and Herhold.

HOHL, *Die Geburten missgestalteter, kranker und todter Kinder*, 129, Halle, 1850. He cites a case of Tucker.

MONTAULT, in *Gazette des Hopitaux*, vi. 293, 1832. Cited in Dr A. Herrgott's Essay, "Des Maladies Fœtales qui peuvent faire Obstacle à l'Accouchement," p. 258.

DREW, in *Medical Times and Gazette*, Sept., ii. 236, 1855.

JOHNSON, in *Transactions of Obstetrical Society of London*, xiii. 53, 1872.

ATTHILL, in *Dublin Medical Journal*, lxix. 533, 1880.

BROWN, in *American Journal of Obstetrics*, xiv. 551, 1881.

UNDERHILL, in *Transactions of Obstetrical Society of Edinburgh*, vi. 78, 1880–81.

Underhill) the expulsion of the fœtus occurred under the efforts of the unaided parturient powers. In most of the others there was marked delay, even when the mother was multiparous, and it was necessary to have recourse to artificial delivery. In Brown's case traction on the hernial mass succeeded in bringing down the fœtus. In Montault's, Drew's, and Johnson's cases, as in my own, delivery was effected by bringing down and dragging on a foot. Dr Atthill made traction in his case with a blunt hook applied over the fœtal shoulder.

ARTICLE III.—*Case of Malignant Stricture of Œsophagus; Circumscribed Gangrene of Left Lung; Double Pneumonia; Autopsy.*

By J. B. BUIST, M.D., F.R.C.P.E.

IN the beginning of March last, J. A., æt. 61, a retired butler, consulted me for a "swelling in his throat," which annoyed him when he attempted to swallow. He thought the swelling was due to cold, as he complained at the same time of a dry cough. On examining his mouth and throat nothing abnormal was observed, and there was no swelling of any kind to be detected externally. Further inquiry elicited the fact that he took a long time to his meals, as he was obliged to masticate his food very completely before swallowing it, and the act of deglutition had to be performed very slowly. If he tried to swallow a mouthful of food all at once he felt as if he would choke, and was obliged to leave the table and reject it. This was especially the case when eating beef, mutton, or potatoes, as well as soups containing barley and rice. He had less difficulty with bread, fish, and liquids. Broth required to have all the solids removed by straining before he would take it. The symptoms indicated stricture of the œsophagus from some cause.

Examination of the chest showed that there was slight dulness in the left infra-clavicular region. The other parts of both lungs were resonant. The respiratory sounds were feeble, but there was no crepitation. The heart sounds were normal. There was no evidence of the presence of thoracic aneurism. There was no pharyngeal paralysis. His general health was fairly good, and he was able to follow his occupation as a barman for six hours daily.

The patient was under observation from time to time till the middle of July, when he complained of having gradually become worse. He could now take very little solid food. He refused fish, and confined his diet to bread, corn-flour and milk, and beef-tea, with a soft boiled egg occasionally. The choking fits during meals were more frequent. The cough was also more troublesome, and it was now accompanied by some mucous expectoration. He had also lost a good deal of flesh. He had no pain, and said he was quite well, except for the "swelling" in his throat, which he attributed to cold. Up till this time I had refrained from passing any instrument into the stomach, although there was little doubt of the existence of an organic stricture of the œsophagus, as I was afraid that the irritation might increase the mischief; but as it seemed desirable to ascertain the exact condition of the tube, on the 17th July Mr Chiene saw the case in consultation with me. He passed an oval-shaped probang, which met with an obstruction about the middle of the œsophagus, as near as we could determine. The obstruction was overcome without much difficulty, and the instrument glided into the stomach. On withdrawing it Mr Chiene felt resistance as it repassed the obstruction. He came to the conclusion that the stricture was malignant, probably epitheliomatous.

July 27.—Mr Chiene again saw the patient with me. He had been able to swallow much more easily, and expressed himself as considerably relieved. A larger probang was therefore passed without any difficulty.

I did not see the man again till the beginning of September, when his condition had changed for the worse still further. He had become more emaciated, owing to the small amount of nourishment he was able to take. His breakfast consisted of a teacupful of milk with an egg beaten up in it, and a square inch or two of bread, while a small basin of beef-tea or other soup was all he had for dinner. He took nothing else till next morning. Any attempt to swallow solids brought on spasm and a choking fit.

Sept. 15.—Mr Chiene saw the patient with me; but as he objected to have an instrument passed again, we thought it better not to distress him by pressing the matter. From this time till the end of October he was much in the same state. He weighed about ten stones.

In the beginning of November, about five weeks before his death, his cough became more troublesome, and he was entirely confined to the house. His expectoration now was purulent. During the month the sputa had an offensive odour three or four times. The smell was so bad as to fill the room. He also complained of a dull, deep-seated pain in the left mammary region. His breath was not offensive, but I suspected the commencement of circumscribed gangrene of the lung. I could not detect, however, either crepitation or friction sound over the seat of pain.

Towards the end of November the pain became more severe at irregular intervals, and for a week the expectoration had a constantly fœtid odour. His breath also became very offensive. He could take very little nourishment.

Dec. 3.—I saw him about midnight, and found him sitting up in bed and breathing with great difficulty. He complained of agonizing pain in the left side. In the left mammary region, where the pain was most acute, the percussion note was tympanitic and the respiration was cavernous. In the dorsal region on both sides there was dulness on percussion. On the left side the breathing was tubular, and on the right there was fine crepitation during inspiration and expiration. I concluded that there was a cavity in the left mammary region, and that double pneumonia had set in, which would probably soon prove fatal in his enfeebled condition. The administration of remedies (chiefly stimulants) was difficult, owing to the dyspnœa and dysphagia, and the man grew rapidly worse and sank on the 6th December. The expectoration was very fœtid for a few days before his death.

Autopsy, thirty hours after death. Thoracic cavity only.

External Appearances.—Height, 5 ft. 9 in. Rigor mortis fairly marked. Lividity slight. The body was considerably emaciated. The right foot was much deformed from old injury.

Thorax.—There was a considerable amount of subcutaneous fat. On removing the sternum the pleura was adherent in the left mammary region, and in this situation an empty gangrenous cavity about the size of a small apple was exposed. It was wedge-shaped, and several bands of fibrous tissue crossed it in a radiating direction from the substance of the lung to the wall of the chest. It occupied the anterior and lower part of the upper lobe, and was perfectly circumscribed by adhesions. The remainder of the left pleura was non-adherent, but the lower lobe of the lung was partially covered by recent lymph. The left pleural cavity contained a small quantity of red serum. The right pleural cavity was nearly dry. No tumour could be felt in the lower half of the posterior mediastinum; but at its upper part, immediately above the bifurcation of the trachea, there was a small firm swelling about the size of a walnut in the wall of the œsophagus. The trachea and œsophagus were cut across above this, and the thoracic viscera were removed *en masse.* On slitting up the œsophagus the stricture was exposed, and its cone diameter was found to be ·45 inch. The canal was then laid open.

The mucous membrane corresponding to the tumour was seen to be destroyed all round for an inch and a half, and the inner surface was rough and broken down. There were two small perforations about a quarter of an inch in diameter in the anterior wall of the œsophagus, but these did not expose the trachea, which was found intact, although its mucous membrane was much congested. The posterior wall of the trachea corresponding to the perforations was dark in colour and œdematous.

Left Lung weighed 1 lb. 12 oz. In the upper lobe there were two old catarrhal pneumonic nodules the size of a walnut and grape respectively. The anterior portion of the base of the upper lobe was occupied by the gangrenous cavity above described. On section the whole lung was much congested and œdematous, and the lower lobe was in a state of commencing red hepatization.

Right Lung weighed 1 lb. 15 oz. Very emphysematous, and in a similar condition, but it was not gangrenous.

Heart and Pericardium.—The pericardial sac contained an ounce of yellow serum. The heart was empty. It was anæmic, but otherwise healthy. Weight 8 oz.

Microscopic examination of the tumour showed that it was composed of well-marked fibrous meshes, between which were closely packed rows of cells containing one or more large, lustrous nuclei. There were no cell-nests. It agreed in structure with the scirrhous form of carcinoma.

Remarks.—1. *Diagnosis.*—This was comparatively easy. There was no sign of aneurism or other tumour either in the neck or chest. In pharyngeal paralysis the power of deglutition is completely lost from the first, and the difficulty in swallowing does not come on gradually, as it did in this case. Then the age of the patient and the absence of any traumatic cause pointed to a malignant rather than a simple stricture.

2. *Termination.*—It is not unusual for such cases to end fatally by exhaustion from inanition. In other rare cases the disease may cause death by hæmorrhage. More commonly, however, it perforates the wall of the trachea or bronchus, and sets up secondary mischief in the lung. Gangrene of the lung is usually produced in such cases by the food passing into the bronchus and being sucked into the smaller bronchi and air-vessels. There the particles decompose and set up intense irritation, which ends in destructive inflammation of the lung. If a large portion of the bronchial wall should slough, it may obstruct the lumen of the tube, and death may be caused by collapse of the lung. This was the cause of death in another case of malignant stricture of the œsophagus in which I made a post-mortem examination for Dr James Jamieson. In the case just recorded it is difficult to account for the gangrene of the lung in the absence of perforation of the trachea. The most likely explanation is, that during the frequent choking fits which followed spasmodic attempts to swallow some of the food was sucked into the trachea and passed naturally into the left bronchus and upper lobe of the lung. This might easily happen, as all the food the patient took was liquid or in a state of fine division. It would then become decomposed, and set up the circumscribed inflammation which ended in gangrene. The transition from this to the double pneumonia which set in a few days before death is easy to explain.

3. *Treatment.*—This case suggests the necessity of devising some method of feeding which will not be too irksome to the patient. The probang was passed merely to confirm the diagnosis and to localize the seat of the disease, and its use was delayed till it became probable that gastrostomy would be necessary. This patient strongly objected to any further instrumental interference, and he was equally averse to nutrient injections per rectum. In his case feeding through a flexible tube would have prevented the choking attacks, and for a time, at least, the gangrene of the lung, which was the immediate cause of his death.

4. *Family History.*—He was the seventh child in a family of

eight, all of whom, except a sister, are dead. His mother lived till nearly 70, but his father died at 54. No satisfactory account of the causes of death could be obtained.

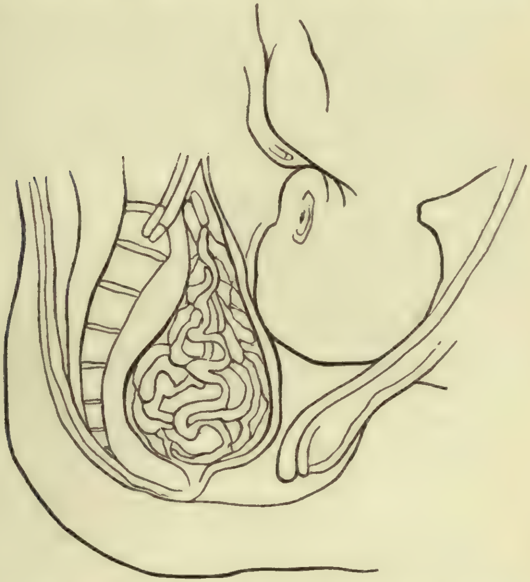
ARTICLE IV.—*Vaginal Enterocele.* By PETER YOUNG, M.D., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women in the Edinburgh School of Medicine.

(*Read before the Edinburgh Obstetrical Society*, 11th *January* 1882)

RECENT writers have taken but little notice of this complication, no doubt owing to its rarity. It may be met with both during pregnancy and in the non-pregnant state, but less frequently in the former condition.

As might be expected, however, owing to the more relaxed state of the pelvic organs, it more commonly occurs in women who have borne children, although instances are on record where it happened in the virgin. Considering the relations of the peritoneum to the pelvic viscera, and the great strain to which it is subjected in the various action of the body, it is rather wonderful that vaginal enterocele does not occur more frequently than it appears to do. This is apparently due to the obliquity of the pelvis, by which the abdominal viscera are directed against the pubis and inguinal region, and prevented from pressing unduly against the pelvic involutions of the peritoneum. Still there are certain attitudes of the body in which the long axis of the abdomen coincides with that of the pelvic inlet; and if, in these circumstances, the abdominal viscera be forcibly acted upon, the bowels or omentum may push down the pelvic peritoneum either in front of or behind the uterus, and cause a bulging of the anterior or posterior wall of the vagina. This is shown by the fact that the majority of the cases have taken place suddenly, with the development of alarming symptoms, in the endeavour to lift heavy weights, during violent muscular efforts to recover a wrong step, excessive straining at stool, or in consequence of falls from a height. Sometimes, however, though rarely, vaginal hernia may occur without the patient being aware of having done anything to cause it, and without producing much or any inconvenience. In these cases, if occurring for the first time, the hernia is generally posterior to the uterus, and the protruded bowel lies between the rectum and vagina, distending the posterior wall of the latter to a greater or less degree. Usually it is a portion of the ileum which is forced down, but portions of the omentum and of the large bowel have been observed protruding. Before proceeding further, it will be convenient to record a case of vaginal enterocele during labour which occurred in my practice six years ago.

A. M., æt. 39, pregnant for the sixth time. Her previous confinements, at all of which I attended, were easy and natural, and call for no remark. At 3 P.M., 29th December 1875, labour pains began, and at 7 the same evening I was sent for. On entering the room, the patient, who was walking up and down, said she was glad to see me. She was sure there was something wrong, as the pains did not seem to be doing any good. There was no complaint of any acute pain, and, beyond a feeling that the labour was not advancing as on former occasions, there was nothing to indicate any important deviation. On examination per vaginam, the pelvic cavity seemed to be nearly completely occupied by a large, soft, elastic, painless tumour, which pushed the posterior wall of the vagina against the symphysis pubis. On introducing two fingers and pressing the tumour, it yielded readily, so that the sacral bones could be felt through it, but the tumour itself did not diminish in size, and seemed to rise up on either side of the point of pressure much in the same way as a tennis-ball does when manipulated with the fingers. Soft flattened bands could be obscurely felt rolling under the fingers when the tumour was pressed against the sacrum. On pushing it up, while the fingers sank into the swelling, it did not become displaced, and its behaviour was similar when pressed downwards towards the anus.



By introducing the hand into the vagina and passing the fore and middle fingers up in front of the tumour, the os uteri could be felt dilated to the size of a crown-piece, and the head presenting. Although a little puzzled at first, I soon came to the conclusion, from the signs just described, that a considerable portion of the small intestine had got pressed down into Douglas's space, distending the peritoneal involution, and displacing the vagina forwards. Acting on this diagnosis, the patient was placed in the genu-pectoral position, the hand, well oiled, introduced into the vagina, and the tumour gently and steadily pushed towards the pelvic brim. On executing this manœuvre, the swelling slowly and noiselessly disappeared into the abdominal cavity, passing on the left side of the sacral promontory. Before withdrawing the hand, two fingers were hooked into the cervix uteri, the latter drawn down, and as the patient was brought to the usual position on her left side, pressure was exerted by the other hand on the abdomen, so as to engage the head of the child on the pelvic brim and prevent the bowel slipping down again. Under the combined influence of the abdominal pressure and the uterine pains, which were tolerably vigorous, the head descended rapidly into the pelvis, and the child—a male—was born twenty minutes afterwards. The patient made a good recovery; but, fearing a return of the enterocele, she was kept in bed for a fortnight, and the vagina washed out night and morning with solution of alum. As there was no return of the protrusion, and the patient was anxious to leave her bed, she was allowed to do so at the time mentioned.

Four weeks afterwards—*i.e.*, six weeks after delivery—she was suddenly seized with pain in the pelvis, went to bed, and took a dose of castor oil, but vomited. Next morning, on rising, intense nausea and pain in lower part of the abdomen were experienced, and becoming alarmed, she sent for me. This was on 16th February 1876.

On arrival the countenance was pale and anxious, the extremities cold, pulse thread-like and quick, nausea and retching well marked, and great pain complained of in the pelvis. *P. V.*, the hernia, although smaller than before, could be felt occupying its former position in Douglas's space, and was tender to the touch. Placing the patient in the inclined lateral position, and introducing a couple of fingers, the protrusion was gently and readily reduced. Immediate relief of all the symptoms followed, a morphia suppository was administered, and perfect quiet enjoined. In the evening she expressed herself as being quite comfortable, and had slept for several hours during the day.

17*th February.*—Passed a good night; feels well; pelvic pain quite gone; ordered to keep quiet and take liquid nourishment, chiefly milk. This treatment was continued next day, and on the day following she got a small dose of castor oil, which opened the bowels gently. No further treatment being necessary, I left her, with strict injunctions to keep quiet till I called again. A day or two afterwards the catamenia appeared (I may mention she did not suckle child, as the nipples were not good), and, having some important business, ventured out. The day was bitterly cold and wet, and she caught a chill. Soon violent symptoms of perimetritis showed themselves, which were rapidly followed by a large effusion of lymph. *P.V.*—No hernial protrusion could be felt, but the uterus and roof of pelvis were tender on pressure. The effused lymph rapidly increased in amount, so that in a few days a swelling of considerable size could be felt in the abdomen, more particularly on the right. It is not necessary to give a detailed account of the peritonitic attack. I may merely mention that she made a very narrow escape for her life, and that Dr Keiller, who saw her in the beginning of May, thought, as I did, that her state was hopeless. She rallied, however; but it was not till the middle of July that she was able to leave her bed, enfeebled both in body and mind. Shortly afterwards she was sent to the country, and gradually regained her strength.

In the following year she again became pregnant, and was confined on the 3rd November, the labour being natural and easy, and without any trace of hernia. Since then she has enjoyed vigorous health.

This case appears to me to present several points of interest on which I may be allowed to make a few remarks.

1. The stealthy mode of its incidence. It is true that on questioning the patient afterwards she said she had felt uneasy sensations in the pelvis for about two months before labour, but had no difficulty with her bowels, which acted in the usual way. She was not aware of having received any jolt or concussion, or of having made any violent muscular efforts. It was not till the labour pains began and had continued for some time that she began to suspect that there was something wrong. As no examination was made previous to the advent of labour, and, as already remarked, the patient was not aware of any action on her part likely to cause descent of the bowel, it does not seem possible to arrive at any satisfactory conclusion as to the time of its occurrence. The uneasy sensations felt during the last two months of pregnancy may be thought by some to indicate the existence of the enterocele, but similar sensations are so common in pregnancy that not much reliance can be placed upon them. It seems, then, impossible to determine satisfactorily how long the hernia had subsisted before it was discovered; and it is evident that the bowel had been subjected to no injurious pressure previous to the accession of the parturient pains.

2. The reappearance of the hernia with symptoms of intestinal irritation, and the rapid subsidence of the latter on reduction of the tumour.

3. The peritonitic attack which took place a few days afterwards, and which was accompanied by a large amount of effusion of lymph around the pelvic organs and bowels, does not appear to me to have been caused by the hernia, but was the result of cold and wet acting upon the genital organs while in a congested state.

4. Although the immediate effects of the peritonitis were sufficiently alarming, it performed the good office of so altering the parts as to prevent the re-descent of the hernia without, as the subsequent pregnancy proved, impairing the functions of the generative organs. As this subject has not, so far as I am aware, been discussed in this Society, and no case of the same kind has been recorded in its Transactions, it will not, perhaps, be deemed unprofitable to take a survey, however short and imperfect, of its literature.

Garengeot (*Mémoires de l'Académie Royale de Chirurgie*, tom. i., p. 707), who wrote in the beginning of last century, gives a history —interesting as being the first of the kind on record—of the wife of a costermonger who sought his advice for what she considered a descent of her womb. She had had five children, all of whom were very large at birth. About a month after her last confinement she made an effort to lift a load, and while in the act felt a derangement within the abdomen and an acute pain in the vagina, of which also she had a sense of great fulness. Notwithstanding this she went about her ordinary duties for some time subsequently. The descent into the vagina became so considerable that it showed itself at the external orifice. The patient felt from time to time pains of a spasmodic character, which seemed to take their origin in the vagina, as well as pain in the stomach, with sickness, and was unable to void urine except in the supine posture. On examination, Garengeot discovered a whitish tumour, which not only occupied the vagina, but projected beyond the labia in such a manner as to admit the introduction of a finger between it and the vaginal parietes posteriorly. The os uteri was in its natural situation, and the tumour diminished very much in size on pressure. This at once made him suspect it to be a descent of the intestine; and with that impression he placed the patient in the recumbent posture and applied the taxis, when he felt the contents of the tumour receding through the superior and right lateral portion of the vagina. After the retrocession the vagina was left soft, relaxed, and thin. In order to strengthen his conviction that it was a case of vaginal hernia—of which he had never heard before —he desired the patient to get up and walk, and also to cough strongly. These movements caused the tumour to return again immediately, and convinced him of the truth of his surmise. He reduced it again, and after some trouble succeeded in keeping it up by means of a suitable pessary.

In this case it will be noticed that the descent of the bowel was in front of the uterus, and that the anterior wall of the vagina was protruded in a woman predisposed to the accident by the relaxed condition of the genital passages consequent on the recent confinement and the succession of large children to which she had given birth.

Davis (*Principles and Practice of Obstet. Med.*, vol. i. p. 143) relates a similar case in a young woman who, soon after her marriage, sustained a fall from a building and was rendered insensible. On regaining consciousness she felt, to use her own words, "as if her whole inside was coming down at her womb," and had a strong impression that her bladder was ruptured. She was unable to micturate, and attempts to do so increased the pain, caused violent retching and alarming syncope. On examination per vaginam a swelling of considerable size and of great sensitiveness was found filling the upper and middle parts of the vaginal passage. At first Davis thought this was formed by a protrusion of the bladder, but this idea was soon negatived on emptying the bladder by the catheter without giving any relief to the symptoms or effecting reduction of the tumour. By careful manipulation he reduced the hernia, the bowel making a gurgling noise as the last portions escaped into the abdomen. The precise locality of the rupture could now be felt a little in front of the cervix uteri and a little to the left side. A pessary was then introduced; inflammatory symptoms supervened, which were treated after the heroic method, notwithstanding which the patient recovered.

Hoin (*Essai sur les Hernies*) mentions several cases of vaginal hernia; among others that of a young lady who was troubled with obstinate costiveness, so that she sometimes went unrelieved for eight days together. While making strong efforts at defecation she suddenly experienced acute pain within the pelvis, which extended to the left iliac region. The pain was violent only for a short time, but it never entirely ceased, and was always felt on the left side. Three weeks afterwards the patient discovered a swelling at the vulva, which was the seat of occasional lancinating pain. Under the impression that an abscess was forming she applied poultices. The tumour, however, increased in size; and becoming anxious, she consulted Hoin. On examination he found a soft swelling protruding half an inch beyond the level of the labia majora, abutting principally against the fourchette, extending about three inches into the vaginal passage, and occupying the left lateral portion of its parietes rather posteriorly. The swelling was not very sensitive, was easily replaced, and emitted a gurgling noise as it disappeared into the abdomen. In this case the descent had evidently taken place behind the uterus.

Levret (*Obs. sur les Polypes*) examined the dead body of a woman who died in a state of idiocy, and who had a vaginal hernia. The tumour was of sufficient size to occupy nearly the whole of the vaginal passage, and was easily reduced. It was found to be caused by a displacement of the sigmoid flexure. The uterus was much displaced towards the right side of the pelvis.

Gunz (*De Herniis Libellus*) relates the case of a woman who had a tumour which occupied one side of the vagina and presented itself at the orifice of that passage. She consulted a surgeon, who, it was believed, mistook it for an abscess and plunged a bistoury into it. The incision was immediately followed by a protrusion of the cæcum and of a great part of the colon. The protruded bowels were not attempted to be reduced. Gangrene supervened, and the poor woman died.

Sir Astley Cooper (Cooper on *Hernia*) mentions several cases of vaginal hernia where the bowel descended posteriorly and to the left side.

Smellie relates three cases occurring during parturition, two of them in his own practice, and one in that of Mr Stubbs of Bedfordshire. In the latter case the woman, who was in her first labour, had been ten hours under the care of a midwife when Mr Stubbs saw her. The membranes were already ruptured. The vagina and pelvis were occupied by a tumour, which he at first mistook for the head or nates of the child. He had scarcely room to introduce his fingers between it and the pubis. On dilating and pushing up the tumour, he found the orifice of the uterus well developed, and the child's head resting against the pubis. Having ascertained these facts and withdrawn his hand, which was much cramped, and deliberated upon the nature of the tumour, he came to the conclusion that it probably consisted of a portion of the intestine which had been forced down at the back part of the vagina. He therefore reintroduced his hand, and, by the application of pretty firm pressure upon the tumour, effected its reduction. The head immediately descended, and the delivery was terminated by the forceps. Mother and child did well. In one of Smellie's own cases, the hernia, which descended to the left side of the perineum and anus, had existed for two years before he saw it. It had originally presented itself about a month after the patient's first confinement, and was of considerable size. She became pregnant again, and whilst in that condition was seized with a violent cough, which forced down the intestine so much as to increase the swelling to the size of a man's fist. About five weeks before term the tumour had attained a large size and was very painful. On examination the swelling was livid, and the parts around of a fiery red colour. She lay on her side, and, when turned on her back for convenience of examining the tumour, it broke in the middle, and from the opening, which was small, there issued a spoonful of pus mixed with blood, and immediately after that about half a pint of thin grayish fluid. Dr Smellie was much alarmed, as the ileum had evidently burst, and a part of it had mortified. Contrary to expectation, the pregnancy went to term, and some months after her confinement the ruptured part presented an appearance of firmness, although in the centre there was a small orifice through which a little ichor continued to ooze. Smellie imagined that the inflamed intestine had adhered to the neighbouring viscera after the sloughs had been thrown off. The patient was frequently troubled with violent pains and a great sense of weakness on the side of the abdomen corresponding to the hernia, as if the gut had become contracted so as to interfere with the easy passage of the ingesta. In about five months after her recovery the rupture reappeared, and soon afterwards patient again became pregnant. The tumour was reduced, and delivery safely effected.

The bladder and the rectum may be prolapsed along with the ileum, an instance of which is recorded by De Haen (*Ratio Medendi in Nosocomio Practico*).

Boivin and Dugès (*Diseases of Uterus*, p. 511) mention a case where a portion of the large bowel descended, obstructing the vagina and reaching to the perineum. It could be softened and flattened by the finger.

Of recent writers, Meigs (*Note to Colombat on Diseases of Women*) relates a case of vaginal enterocele occurring during labour, in which the parturient process was checked by a loop of intestine until he succeeded in reducing it.

Fordyce Barker (*American Jour. Obst.*, vol. ix., 1876) records three cases occurring in his own practice, and gives the history of another communicated by B. A. Clements.

Thomas (*Diseases of Women*, p. 174) mentions a case recorded in the *Centralblatt für Chir.*, 3rd May 1879. "The woman, æt. 52, had had twelve children, the last born twelve years ago. On examination, a swelling about 3 inches long, reddish-blue in colour, and covered with granulations and pus, protruded between the labia. *Diagnosis.*—Polypus of the uterus; removed. After suffering severe pain in the abdominal region for several hours, death ensued. *Autopsy.*—In the pelvis there was half a pound of liquid blood. Uterus and ovaries atrophied. A portion of the great omentum and a piece of the transverse colon were carried away with the mass. In the posterior wall of the vagina there was an opening about 5 centimetres in diameter."

Etiology.—From the above histories, shortly and imperfectly as they are given, it will be seen that vaginal enterocele may occur suddenly, accompanied by pain, generally of an acute character, in consequence of violent and irregular movement, straining during defecation, lifting heavy weights, etc., or, on the other hand, it may be developed silently, without any consciousness at the time on the part of the patient, and without specified cause.

Differential Diagnosis.—Although the diagnosis will not, as a rule, be difficult, great caution is requisite not to fall into serious error, as shown by two of the histories which I have given. The peculiar soft elastic feel of the tumour, the detection of soft flattened bands, or of a soft doughy mass, under the finger when pressed, and its reducibility when the taxis is properly applied, will indicate its nature. The diseases for which it may be mistaken, and with which, it must be remembered, it may co-exist, are prolapsus vaginæ, cystocele, rectocele, uterine polypus, vaginal cyst, ovarian cyst, abscess of vagina and perineum, and inguinal hernia. In doubtful cases it will be prudent to use the exploring-needle or aspirator to aid the diagnosis.

Prognosis.—This is, upon the whole, favourable. With the exception of those mentioned, no fatal cases have been recorded. This is no doubt due to the ability of the practitioners having charge of the cases, and perhaps to the non-publication of those which had a fatal issue. It is to be noted that there is great liability to strangulation of the bowel and peritonitis, owing to the readiness with which the rupture may return after its reduction; and the prognosis, therefore, will depend in great measure on the possibility of preventing the redescent of the tumour. The peritonitis which is so apt to be set up, by causing adhesions to form between the neighbouring viscera and blocking up the artificial opening, sometimes effects a radical cure.

Treatment.—This will vary according to the size, situation, and time of appearance of the tumour. If it is discovered during labour, the first duty of the practitioner will be to return it to the abdomen as speedily as possible, and to prevent its return by engaging the presenting part of the child in the pelvis. If the hernia be situated posteriorly, we shall generally succeed in doing this; but if it is placed anteriorly, the hernia is apt to slip back, and it will then be necessary to keep up pressure by means of the finger or a tampon of cotton till the child comes to act directly upon the opening. After delivery, the patient should be kept in the recumbent posture for a longer period than usual, and the vagina washed twice or thrice a day with an astringent lotion, in the hope that the enterocele may not recur. If it does, a pessary will be required; and should circumstances seem to warrant it, the operation of colporrhaphy may be performed. In cases occurring in the non-pregnant state, treatment consists in reduction, subduing any inflammatory symptoms that may occur, the application of a suitable pessary, or colporrhaphy.

ARTICLE V.—*A Difficult Face Case, Complicated with Shoulder Dystocia from an Unusual Position of the Arms.* By R. MILNE MURRAY, M.A., M.B., M.R.C.P.E., Physician Accoucheur, Western Dispensary.

(*Read before the Edinburgh Obstetrical Society, 11th January* 1882.)

THE case, an account of which I desire to lay before the Society to-night, is one which I was fortunate to be able to watch during the greater part of its course, and it is one which was complicated by a condition which, so far as I know, has not been described by any writer. Its rarity is thus, I trust, a sufficient reason why it should be put on record.

Mrs C., aged 36, mother of eight children, went into labour at noon, 16th December 1881. The pains continued regularly from that time, and she was seen by one of the students at the Western Dispensary at 8 P.M., at which time the os was fairly well dilated. At 11 P.M. he found it fully dilated and the membranes prominent, but he was unable to make out the presentation. He remained with the patient all night, and though the pains continued powerful and regular, he failed to recognise any progress, and at 6·30 A.M. he sent for me.

I saw the patient at 7 o'clock. She was moving about the floor during the intervals of the pains, which were severe about every five minutes. I noticed the abdomen to be unusually prominent under the sternum. Her temperature and pulse were good. She had passed urine frequently during the night. She states that she was always "big" when pregnant, but never so much so as at this time. Her previous labours had been tedious, but never instrumental, and all the children were living.

On examination I found the abdominal walls excessively tense, even between pains. The fœtal body could be made out indistinctly lying to the left of the mesial line, and the abrupt prominence of the abdominal tumour under the sternum, to which it reached, was very remarkable. Firm pressure over the pubes enabled me to feel the head indistinctly. It had not engaged, and could be moved about through the abdominal wall. Careful examination failed to detect the position of the small parts of the fœtus. The fœtal heart was indistinctly heard on the left side.

Per Vaginam.—The vagina, moist and roomy, was two-thirds filled with a tense, projecting bag of membranes. Beyond this the fully-dilated os could be made out, and by carefully passing the finger through the os on the right side of the projecting bag, the tip passed straight into the mouth of the child. The other parts of the face could be made out with perfect ease. The fronto-mental diameter of the face was lying directly in the pelvic transverse, and the chin, which was directed to the right side, was, as usual, somewhat lower than the forehead. The orbits and frontal eminences could be made out with comparatively little difficulty so that the chin descent was by no means striking.

During the intervals the face seemed to rest lightly on the pelvic brim, but could be dislodged upwards with the greatest ease. During the pains the face was forced downwards upon the brim, but did not seem to enter it at any part. I observed, also, that even during a pain there was a distinct space between the sacrum and the left side of the face, while the right side seemed to lie hard on the pubis.

At this stage the question of turning presented itself for consideration. The operation, so far as I could judge, could have been performed with ease. The head was freely movable, the membranes were unruptured, the passages were fully dilated or dilatable, and the position of the fœtal limbs was easily determinable from the presentation and position of the head. Yet, considering that the great majority of face cases occurring in multiparæ terminate naturally, though tediously, and seeing no reason why this one should not do so, I did not feel myself justified in interfering at this stage, and concluded that it was better to allow the face to engage in the usual way, and, if necessary, to attempt manual rectification of the position later on.

At about 8.30—that is, half an hour after I first saw her—the membranes ruptured, and a very large quantity of liquor amnii escaped. This was immediately followed by a sudden descent and engagement of the face in the transverse. So far as I could make out, this diameter corresponded exactly with the fronto-mental of the fœtus. The chin was distinctly lower, but the frontal surface for some distance beyond the orbits could be felt. The right malar surface was also more advanced than the other. The case was thus one simply of face presentation at the brim in the transverse, and the point of interest now lay in observing whether the chin, under the influence of the uterine action, would turn backwards or forwards. The escape of the waters was followed by an immediate and appreciable diminution of the abdominal tumour, but I noticed that the remarkable infra-sternal projection was relatively as well marked as ever.

I now set myself to watch the progress of every pain, and found that during each pain the chin performed a distinct sliding movement round the brim in the direction of the right sacro-iliac point. During the first few pains this was a movement of very limited extent; but by-and-by I found that there was a distinct difference in the position of the chin, which seemed now passing out of the transverse and approaching the right oblique. While I was observing this a sudden succession of violent pains occurred, and in spite of all my efforts to the contrary the chin slid round to the oblique, and ultimately lay impacted against the right sacro-iliac synchondrosis. Here it seemed to become fixed. I found that the frontal surface could no longer be felt, but the orbits could still be made out. The depression of the chin was thus more marked.

The case had now become a "first" or right *mento-posterior*, and this had occurred within fifteen minutes of the rupture of the membranes.

The face was not, however, so firmly jammed as to preclude the possibility of turning even at this stage; for I believe I could have passed my hand into the uterus even then. At the same time, it would have been vastly more difficult than when I saw the patient first, and after due consideration, having failed to effect rectification with the fingers, I resolved to apply forceps for the following objects:—

1*st*, To endeavour to promote flexion by seizing the occiput, if possible.

2*nd*, To prevent further backward rotation of the chin, and, if possible, to correct the position of the latter by attempting forward rotation of the presenting part by their means.

For the purpose of seizing the occiput I resolved to apply the blades as near as possible in the left oblique, and without difficulty introduced the lower blade between the left side of the face and the posterior pelvic wall; but, owing to the impaction of the right side against the pubis, I had some difficulty in applying the upper blade so as to lock. By some care in adjusting the lower blade I succeeded in catching the head fairly well in the desired diameter, and also well back. The handles were, however, wide apart when locked, and it was obvious that the fœtal face and head would be under much risk of injury from compression if vigorous traction were made. I therefore made steady traction backward, using as little compressing force on the handles as possible, and at the same time attempted careful and gentle forward rotation of the chin.

At the commencement of these efforts the head seemed to come down slightly, but no change whatever could be detected in the position of the chin with reference to the pelvic diameters. Further traction was made in the same manner, but, owing to the limited amount of compression that I felt myself justified in bringing to bear, the forceps slipped both backwards towards the chin and downwards over the head. This resulted in such an amount of separation of the shanks that the perineum and vagina were stretched to such an extent that I dreaded their laceration, and felt myself compelled to desist and to remove the forceps. This I did, and made a careful examination, when I found the face apparently a *little* lower down than before the application. The eyes and other features were still quite easily felt, and, so far as I could judge, no change whatever in the direction of forward rotation had occurred.

I deemed any further interference at this stage inadvisable, and resolved to give the case a chance of spontaneous termination, and left the patient, with instructions to examine her from time to time and note any change.

I returned at 12 o'clock, and found the state of matters exactly as I left them, the pains having continued regularly, though at longer intervals and of somewhat less power. The patient's strength was still good, and she had taken some nourishment.

At 2 P.M. I again saw her, and found her condition unchanged.

At 4.30, having summoned two more pupils from the Dispensary, I placed the patient completely under chloroform, and found, on careful examination with the whole hand in the vagina, the head and face in precisely the same position as I had left them. The features were more difficult of recognition, since an extensive malar *succedaneum* had developed on the right side of the face, bulging beyond the nose and mouth.

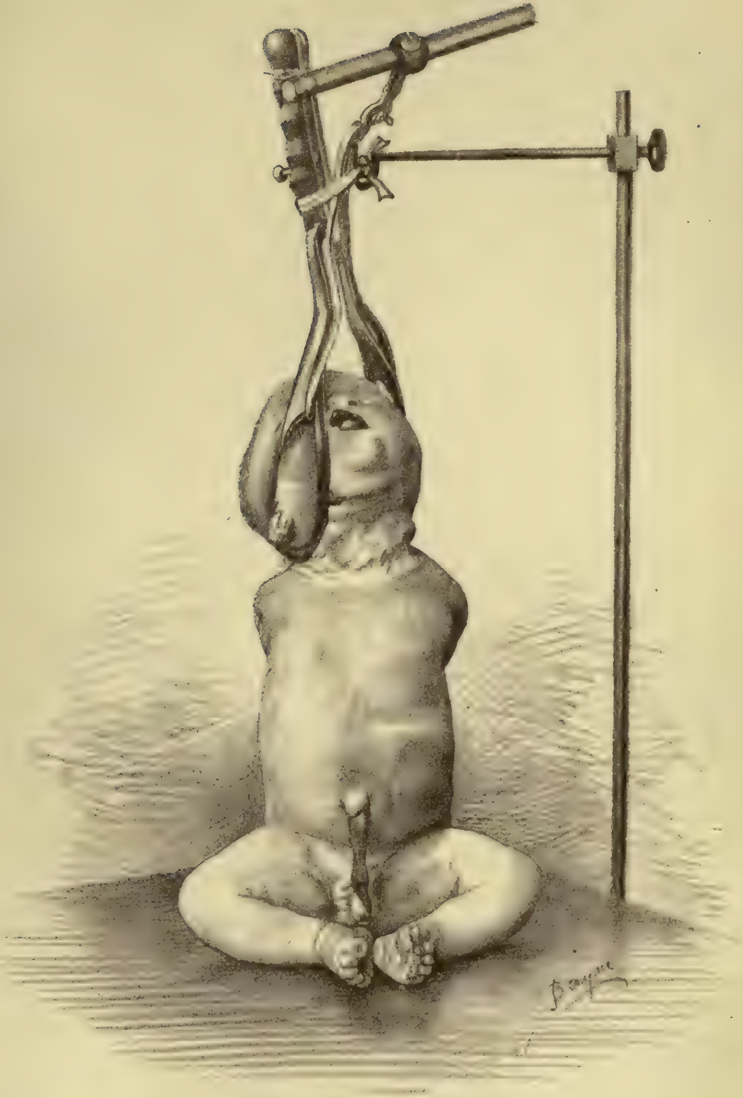
As labour was obviously making no appreciable progress, and as the woman was beginning to show some signs of exhaustion, I resolved again to attempt delivery or modification by the forceps.

This time I had provided myself with a set of Professor A. R. Simpson's axis-traction forceps, and I proceeded to apply them. I found the application of the lower blade as simple as before, and I had the same difficulty with the upper blade from the impaction of the head against the front segment of the pelvis; and when I attempted to compromise matters by bringing the blade a little over the face, I found the greatest difficulty in preventing the tip of the blade from slipping into the mouth. I ultimately succeeded, and the blades locked perfectly. Two hitches, however, occurred at this stage. In the first place, the instrument which I employed was one of an imperfect pattern, and was locked by means of a pin which passed through a fixed eye in the handles. But, on account of the broad, oblique grip of the instrument, no amount of pressure that I could bring to bear on the handles was sufficient to enable me to introduce the pin. The attempts were at the same time, of course, producing a corresponding amount of pressure on the head and face of the child, and it soon became obvious that the force necessary to enable them to lock must inflict somewhat serious injury on the child.

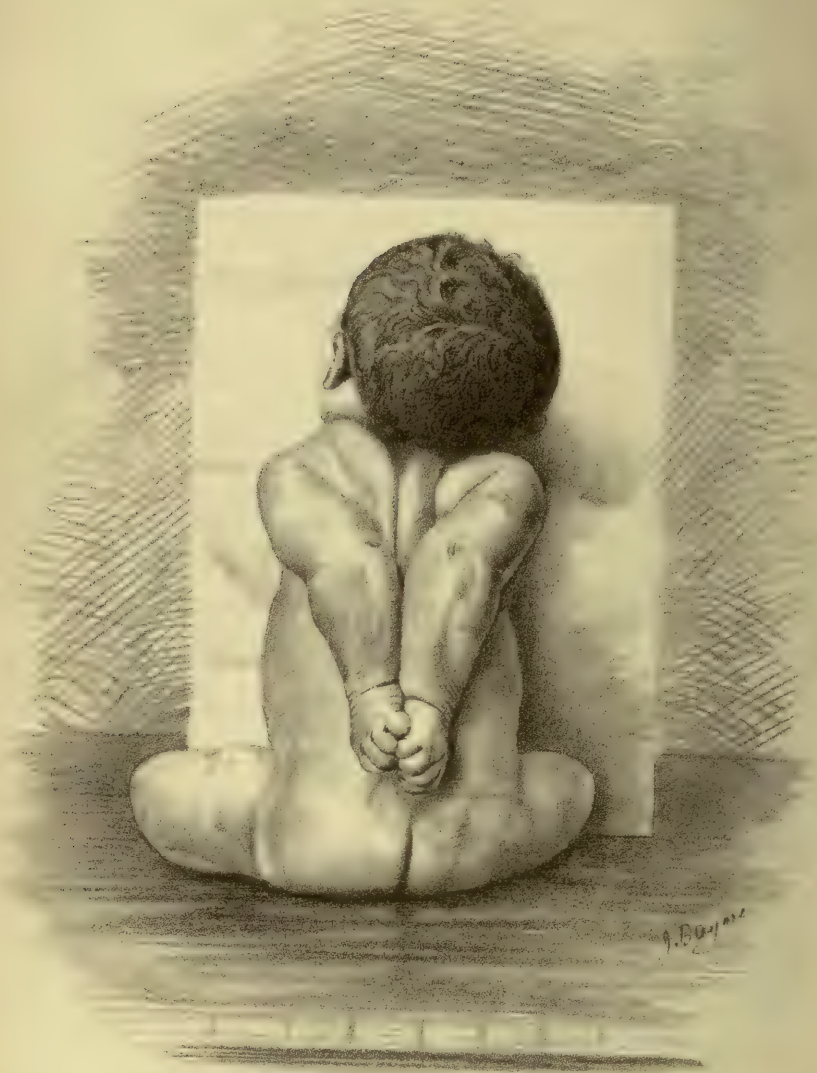
I then attempted to fix the upper traction-rod to which the bar is attached, and which I thought I could easily accomplish after the blade was applied, but the catch-hole in the fenestrum was so high, owing to the peculiar grip, that I could not reach it, and I saw that it was impossible to attach it without first withdrawing the blade. Remembering, however, the great difficulty I experienced in introducing the upper blade at first, I resolved to attempt delivery with the instrument used as ordinary forceps; but after making the utmost justifiable effort I saw that no hope could be entertained of success by this means, and resolved to withdraw the blade and reintroduce it after attaching the traction rod. This was done, and after the same difficulty as before I ultimately succeeded in getting the blades to lock. After failing to secure them sufficiently by means of tape tied round the handle, I was compelled, much against my will, to force the handles together sufficiently to let me introduce the pin.

I then employed the instrument as directed by Professor Simpson, pulling only on the traction-bar, and was surprised and gratified at the ease with which the head began to advance. The pains were still frequent enough, and every time I pulled during one the head made distinct progress. At the same time I found the chin coming round from the oblique to the transverse. After about fifteen minutes the face arrived at the floor of the pelvis, the mento-frontal diameter making its exit in the tranverse of the outlet. There was no movement corresponding to extension or flexion as it passed out; it delivered exactly as it descended. When the face was passing the labia they were much stretched, but there was little tension on the perineum, and delivery took place without any laceration of it whatever. This I account for by the

PLATE. I.



FACE CASE — SHOWING GRIP OF FORCEPS.



FACE CASE — SHOWING POSITION OF ARMS

fact that the long mento-frontal diameter stretched the labia, which gave sufficiently not to tear, while the perineum was only acted on by the shorter bimalar or biparietal diameters, neither of which were long enough to inflict any injury.

When the head was fairly beyond the soft parts I removed the forceps, marking the grip on the face; and as I felt that the chances of saving the child depended to a great measure on its speedy delivery, I directed one of the students to apply pressure to the uterus, with a view of hastening the birth of the shoulders. His efforts were, however, quite futile, no progress of any kind resulting. I examined carefully for the cord or for a nuchal arm, but could find nothing to account for the delay. I then myself applied abdominal pressure, but was equally unsuccessful. Ergotin had been already administered, and the dose was repeated; and I now added a gentle traction on the head to the *vis a tergo*, and after an interval of a few minutes was surprised to find the face of the child, which had remained looking towards the mother's right hip, rotate slowly round towards and past the pubis until it looked almost completely in an opposite direction, *i.e.*, to the mother's left hip. The shoulders at the same time came down, and the *biacromial* diameter lay in the conjugate of the outlet; and when the back of the child appeared, it was found that both arms were lying as nearly as possible parallel to each other, and close together, down the back, fully extended. I allowed it to remain in this position for some few seconds, until the others had an opportunity of seeing the condition, and then withdrew the body. About 15 minutes elapsed from the birth of the head until the birth of the shoulders. The fœtus gave one or two gasps after separation, but the heart could never be felt, and all our efforts to revive it proved unavailing. The third stage was short and natural, and the patient made a good recovery.

The fœtal head presented all the marked characters of a typical face case—flattened vault, prominent right cheek, and obliquely distorted face. It weighed 10·5 lbs. The following are the measurements of the head:—Fronto-mental, 4¼ in.; sub-occip.-breg., 4 in.; bitemporal, 3¼ in.; occip.-frontal, 4¾ in.; occip.-mental, 5½ in.; biparietal, 4¾ in. These diameters are all from ·5 to ·75 in. above normal.

Before concluding, I should like to remark on one or two points of interest in this case.

Firstly, as to the causation. Since the observations on the case commenced some time after labour had set in, I fear it is impossible to decide the question as to whether it belonged to the category of primary or secondary face cases; and tempting as may be the opportunity of theorizing on the subject, I do not believe that it could lead to any satisfactory result.

If it is a primary example, the explanation is probably to be looked for in the position of the arms. It seems likely that the greater breadth of the shoulders in the attitude described than in the normal one would very materially interfere with the contact of the chin and body of the fœtus which usually exists previously to labour. The lower segment of the pyriform uterus would less readily permit the descent of the shoulders, placed as the arms were in this case, than if they had been flexed on the chest. A consideration of the difference of the breadth of the shoulders in the two attitudes would render this quite intelligible. Such a consideration would then tend to place this in the primary category. On the other hand, however, the extreme prominence of the uterine tumour under the sternum may have been a result of this malposition also, and may have had to do with the production of the accident after labour set in. Assuming the original position to have been L.O.A., the attitude of the arms would have tended to push the shoulders back towards the spine of the mother, and at the same time caused the breech to tilt outwards. There would then have arisen a form of uterine obliquity comparable in its effects with the lateral obliquity which Matthews Duncan has shown may have to do frequently with the production of face presentations, differing from it in being antero-posterior in direction. This curvature would have its convex aspect in front, that against which the occiput would lie, while its concave aspect would be in relation to the fœtal sinciput behind. Thus, when uterine action set in, we should expect, according to Duncan's theory, that the part lying in the concavity, *i.e.*, the sinciput, would descend more rapidly than the other, and the face presentation described would thus arise.

I offer both these suggestions with diffidence, as possibly offering an explanation of the condition. As I have indicated, the absence of any observation before labour set in renders the attempt at settling the question now more or less futile. No explanation seems possible from any peculiarity in the shape of the head, which, though somewhat above normal, was perfectly proportioned.

Secondly, the question arises, "How should it happen that, in a multipara with a previous history of so many normal labours, the face should have become impacted?" This seems to me to be explicable partly from the size of the head, but in much greater degree as a result of the breadth of the shoulders interfering with the occurrence of the mechanism proper to a face presentation. It was noticed all through that though a distinct difference existed between the level of chin and frontal bone, yet this difference was never so great as to be very striking, and certainly never so extensive as occurs in an ordinary face mechanism. There can be no doubt that the difficulty attending the descent of the shoulders upon the occiput would account for this, and probably be the chief factor in bringing about the impaction.

Thirdly, as to the position of the arms. I am not aware that a similar disposition of the arms has been described. The nearest approach to it is the well-known condition described first by Sir James Simpson, in which the right arm was flexed behind and under the occiput.

The question naturally arises as to whether this condition existed before labour or arose during it? It appears to me that it was distinctly a pre-existing condition, and that it most likely arose during the earlier months of pregnancy. At that time the arms had probably become extended during some of the movements of the fœtus, and, remaining in that position, had gradually become compressed more and more firmly by the diminishing relative capacity of the uterine cavity. In these circumstances they might readily slip on to the back, and, once there, any alteration of their position would be almost impossible.

That the displacement should arise during labour is not easy of credence. The extreme tension of the uterine walls would render the transition from a condition of extreme pectoral flexion to an extreme state of dorsi-extension almost impossible.

The practical bearings of the condition are interesting and important.

1. It may have been the primary cause of the malpresentation, as I have indicated. 2. It may to a very great extent have caused the sacrifice of the life of the child; for had delivery of the shoulders been more expeditiously effected, it is possible that its life might have been saved. 3. But it is chiefly in relation to the question of *turning* that its importance stands out. It appears to me that, had turning been resorted to in this case, there would almost certainly have been very serious difficulty with the arms. It is, of course, possible that the hands would have slipped down alongside the buttocks, but it seems to me far more likely that they should hitch. More than probably the forearm would have flexed on the elbow, which would have caught at the brim behind the trunk of the child, and traction would have given rise to a backward movement of the elbows, resulting in a much more firm impaction. Rectification would not have been possible, owing to the height at which the accident would have occurred, and I cannot conceive that anything short of dislocation of both shoulders would have rendered delivery possible.

The mechanism of the shoulders seems to have been very distinct and worthy of note. When the head was born, the biacromial diameter must have been in the right oblique of the brim. On combined traction and compression they had swept round into the transverse, and, at the same time descending, had passed down through the pelvis, reaching the floor and making their exit in the conjugate. Such mechanism only could explain the very extensive movement of the fœtal head outside the pelvis, and the close analogy to head mechanism would be all the more necessary on account of the much increased biacromial diameter.

I have carefully considered the question as to whether the position of the arms would in any way act on the muscles of the neck so as to give rise to any backward traction of the head, but am unable to see how this could arise.

In conclusion, I should like to say a word or two by way of explanation of the treatment adopted at the various stages of the case; and though I have no wish to deprecate criticism, I should like to state here the reasons which I had for conducting the case as I did.

As I have indicated, the question of turning as a mode of treatment arose at an early stage; but although this mode of delivery seemed one of easy accomplishment at this stage, and although the older obstetricians recommend it as a suitable mode of dealing with such cases, yet the fact that the great majority of face cases terminate without interference renders such a step at this stage, as a rule, uncalled for, and I certainly did not feel justified in attempting the operation. As the sequel showed, any attempts at turning would have most likely resulted in a very grave difficulty with the arms—so much so that delivery would hardly have been possible without mutilation of the child. Besides, the extreme mobility of the face at this stage rendered the hope not at all a slight one that the facial position would correct itself at or before engaging. Dr Croom has shown that a well-observed primary face case may terminate by presenting and being delivered as an ordinary vertex, and there seemed quite as much reason to look for such a termination in this case as in the one which he records.

Of course, the rupture of the membranes and the impaction of the facial diameter soon dispelled this hope; but yet there seemed no grounds for interfering until it became clear that the chin was rapidly rotating backwards, and when digital efforts at prevention had failed. Then I felt that interference was called for; and I applied the forceps, not with the view of producing immediate delivery, but for the purpose of depressing the occiput and rotating the chin, and so hastening and assisting the natural efforts. I accordingly caught the head by the occiput, and applied only as much force in compression and traction as seemed justifiable.

While the use of the forceps at this stage did not seem to have the desired effects of checking backward rotation or of depressing the occiput to any marked extent, I think that a certain amount of advantage was offered to the natural efforts by promoting, as it did to some extent, the descent into the pelvis. Further, the absolutely stationary condition of affairs from this time for seven hours indicated that further interference was necessary, and that the natural efforts were not adequate to the task of emptying the uterus.

It also seems to me that the remarkable ease with which delivery was effected by means of the instruments used, after the ordinary form had failed, says much for the efficiency of the former. It was most unfortunate that the only instrument which was available was of an imperfect pattern, for there can be no doubt that the amount of pressure necessary to lock the blades was calculated to do much harm to the face and head. The perfect instrument is provided with an adjustable screw catch, by means of which any amount of graduated pressure can be applied.

It would appear that while the ordinary instrument is quite sufficient to meet the requirements of some high and of most low operations, the axis-traction instrument for such cases as the one under consideration, as well as for others at or about the brim, when *direction* of traction is of as much importance as *amount of force* applied, is an addition to the obstetrician's armamentarium of no small value. While avowedly a modification of Tarnier's instrument, its greater lightness, neatness, and adaptability to the left side position render it in every way a more convenient instrument than its French prototype.

ARTICLE VI.—*Mental Excitement in the Lying-in: its Importance with regard to Maternity Hospitals.* By ERNEST ÆNEAS MACKINTOSH, M.B., C.M. Edin., Resident Accoucheur, Maternity Hospital, Glasgow.

THE subject to which I wish to direct attention in this paper is one the importance of which must be thoroughly appreciated by every obstetrician. It is a complication which crops up with undesirable frequency, exciting no little anxiety in the mind of the practitioner, being an indefinite something with which he has to cope, and for the successful treatment of which he feels himself but ill prepared. I wish to state, however, at the outset, that such a subject is totally unable to be treated of in its wider aspects in such a paper as this, and therefore I wish to exclude entirely actual mania and such cases as more usually come under the notice of the general practitioner. Every one is conversant with the fact that at any period throughout pregnancy the mind may become disordered, and that at two periods in particular this is markedly the case—first, immediately, and second, a few months after labour. These are the types which fall to the lot of the practitioner in private life, traceable, it may be, to hereditary tendency or to a too highly-strung nervous system, and directly caused by the reaction from the efforts of labour, or arising from enfeeblement resulting from active lactation. Such cases as these must be debarred, and attention called to the condition of the poor unfortunates who seek refuge in the wards of our maternity hospitals. The terrible mental strain which burdens the existence of so many of them is no new thing to men engaged in hospital work, neither do I think that the difficulties which beset its successful treatment are underestimated by them. Such institutions do not receive their patients from a fortunate grade of society. Women debilitated in body from precarious and hard living form one class; the overworked and ill-paid girls of the vast floating population of seamstresses, mill-workers, etc., form another type; and neither of these are of the stamp of which we expect a speedy or permanent convalescence from the lying-in period, no matter how perfect the hospital arrangements may be. But when to these unfortunate factors we add those suffering from an overwhelming shame, from the prolonged effort of concealing their whereabouts and their condition from friends, from the saddening prospect or reality of being an outcast from home, from the terrible probability of desertion by the one to whom they had given themselves, and from the reality of a child under these circumstances, we can only wonder that so few succumb to the immediate strain, and that patients so susceptible as they to the ordinary influences of maternity from derangement of organs and enfeeblement of mind do not fall victims to these influences more frequently than they do, the risks of vitiation of the discharges being much greater in their cases than in others, and the chances of mechanical injury being equally great.

It is to this last-mentioned class of cases I would specially direct attention as constituting one, if not the most grave, of the many serious difficulties which stand between maternity hospitals and successful results. The public are apt to forget the sources from which such hospitals are supplied. The percentage of cases whose social history is a happy one is exceedingly low; the great majority are those whose surroundings are worse than miserable, and of these many would undoubtedly close their misery by suicide did such institutions not exist. During my connexion with the maternity hospital of Glasgow this subject has been forced upon me by the almost continuous presence of one or more cases in the wards, some of trivial, others of grave import; but even a trivial case may lead to results almost incredible, affecting the patients of an entire ward. In recording the following cases in illustration, I have selected types of intensity rather than bad cases, which have come under my own observation; and I give them merely to call attention to a subject which is of very grave importance in connexion with maternity hospital results.

1*st Type.*—It frequently happens that an unmarried woman, after the fears and pains of delivery are passed, and she has obtained rest by sleep, awakes to realize the position in which she is placed, and gives way to paroxysms of weeping. The result is that her nervous system is thrown into disorder, her temperature rises rapidly to 103° or higher, and her pulse becomes very variable. The derangement is not confined to herself; the disturbance spreads. Other patients, either through their sympathizing natures or their own situations being so forcibly brought home to them, become also excitable, and frequently weep for hours at a time. The same symptoms, more or less marked according to the varying temperaments of the patients, characterize the entire ward. The more immediate symptoms soon pass off, the system relieving itself, as it were, by the tears; but then come sequelæ which are by no means so transient, and which very materially affect the healthy tenor of the ward. The nervous excitement has deranged the system; in some the discharges become putrid, in others they are in abeyance. Such cases are so common as to require no specializing, and the importance of the results are such as no one will deny.

2nd Type.—Mary W., a young woman, single, was admitted into hospital on the 25th June 1881, to be delivered of her first child. Her more immediate friends were aware of her condition for some time previous to her admission, but had taken great care not to allow this to be known to others. She was delivered, placed in a general ward, and ere long she was observed to be in a state of great excitement. Her face was flushed, the skin hot and dry. The temperature was 102°·6. On examination, nothing to account for this could be discovered. There was no tenderness detected. The mammæ were healthy, and the discharge normal in amount and condition. She was put under treatment, but no satisfactory results were obtained. Meanwhile it transpired that she recognised a patient in the ward as coming from her own district, and was afraid she would be known. She was then isolated. The temperature fell. The excitement then gradually abated, and the attack was passed; but then the reaction set in, bringing with it its symptoms. Tenderness was complained of over the groin, and the discharge became offensive. The stomach became irritable and rejected food. A stupe and fomentations overcame the tenderness, and the use of eucalyptus pessaries (equal parts eucaly. oil and paraffin) brought the offensive lochia again sweet. Chloral and bromide were given to overcome slight recurrence of excitement, and gradually the patient came round.

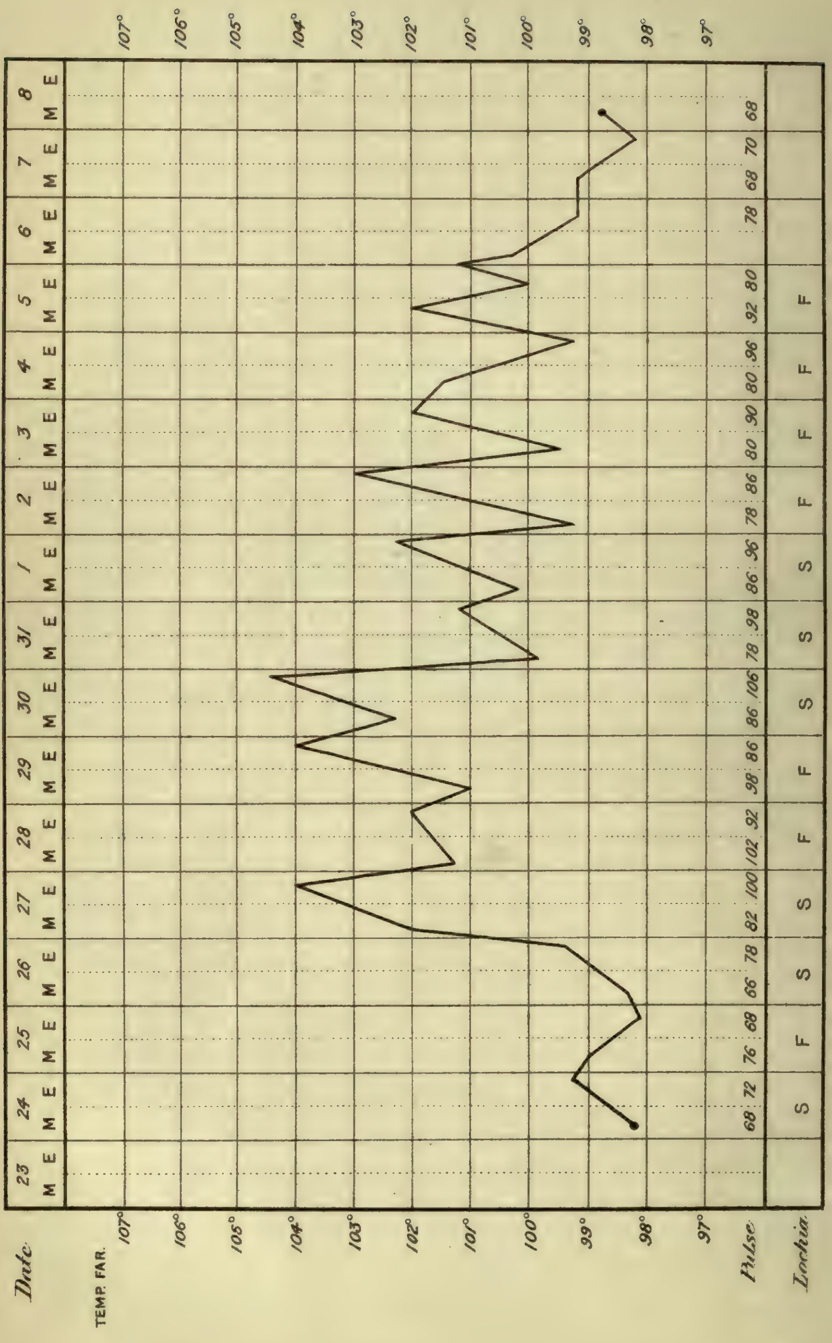
3rd Type.—Bella C., single, aged 45, was admitted into hospital a week or two before delivery. Owing to the age of the patient, she being a primipara, and the likelihood of a severe labour, an experienced nurse was put in charge of the case from the day of admission. The nurse by her tact elicited the following:—She was a bible-reader. The congregation with which she was connected did not suspect the condition in which she was. It was known, however, that her health had given way, and she was granted leave of absence for a month to go and recruit herself. One cannot conceive the mental strain sustained by a patient in such a position, and there is not the slightest doubt, had she been delivered within a day or so of admission, it would have proved a case of unusual severity. In the time intervening between her admission and her delivery, not only was the possibility of a perineal tear reduced to a minimum, but she herself had become used to the institution. She learned from the nurse that her case was unlikely to become known, and hence the mental strain was eased. She was delivered, placed in a ward, and for two days did well. On the third day several students made the round of the hospital with Dr Sloan. She recognised one as belonging to her congregation, and the excitement in a few hours' time was intense. In the evening the temperature was 103°, and it continued so for two days. Under treatment the temperature fell to 100°, and for two days varied from 100° to 101°·6. The excitement passed off, no doubt owing to the fact that she was unnoticed by the student, and the temperature sank to normal on the morning of the sixth day. During that day the discharge became fœtid; the temperature rose with the fœtor. Tenderness was complained of over the uterus, and she became greatly depressed, manifesting such dislike towards her child as to warrant close watching. Careful and close nursing, and still more careful attention to dietary, and no little firmness on the part of the nurse, constituted the treatment from which most satisfaction resulted. It is of little use talking of what might have been in such a case. Happily there was no laceration. Fortunately the mind was considerably eased, before delivery, on the point constituting the greatest dread, and therefore I cannot help thinking the patient had a more speedy recovery than she otherwise would.

Such cases as those I have recorded are what I consider mild. In the first type we had the system relieving itself by weeping. In the last the mind derived solace from the confessional, from having some one in whom it could confide. If the nurse possesses a warm womanly nature (and without this no nurse is efficient), the patient unconsciously reposes trust in her and is at rest. The deep-seated anguish comes gradually to the surface, drawn forth by the kindly sympathy of the nurse, and this throwing off of the mental virus is like the removing the cause of an illness,—hope is bright that recovery will take place.

We must never forget, either, that the dangers in such cases are not confined to the individual. We are dealing with an institution in the wards of which we have but to strike a note to find it vibrate in an incredible number of its inmates; and, apart from this, the fact of one case developing such symptoms is an additional risk to the others, a risk the origin of which is extremely occult, and with which the practitioner is decidedly at a disadvantage.

We pass on now to a type of greater severity.

4th Type.—Elizabeth Y. was brought into hospital by a policeman, having been found in labour in the streets, evidently a woman in fair circumstances. She was delivered of a premature child alive, but her progress towards recovery was unsatisfactory and interrupted. Nevertheless, she remained to all appearance quiet. There was nothing in her conduct or appearance to raise suspicion of more excitement than in most other cases. She was unmarried, and a servant-maid in a good situation. On the Tuesday following, five days after delivery, a young man called at the hospital making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inquiries after a person amissing. The description given agreed entirely with this patient. The young man was her brother, and from him we received this history:—His sister had been from home in service for a considerable time. On the Sunday preceding her delivery she was "cried" in church, and was to have been married on the Friday following. On that day, however, she was amissing, and no trace of her whereabouts could be found. A description of her was sent to the newspapers, this brother alone of the family suspecting she was pregnant, and thinking it probable she had drowned herself, since it was impossible that the young man to whom she was to have been married was the father of her child. This was the case. The excitement of events had undoubtedly brought on labour pains. These had intensified her excitement, and she had left her friends, going she knew not where, only away from exposure and disgrace. Her secret remained with herself, and she wished none to know who or where she was, only to be forgotten. When the fact became known that her brother had discovered her, a fresh impulse was given to her excitement. The details of her case came crowding upon her memory—that she was to have been married, was pregnant to another, had fled from home, had been found in labour in the streets and taken to hospital by a policeman, had been delivered, and now all was known. That evening her temperature was 104°, pulse 110, and treatment was almost useless, the excitement of the patient was so intense. Late in that same evening another brother called, and it was resolved to allow him to see her, hoping that good would come of it. It is interesting to follow the accompanying chart. The temperature falls after that visit, and next day is 101° and 102°. For some days no visit was permitted, and again we see the mental working manifested in the chart. On the evening of the 30th her mother visited her, and the evidences of reconciliation are marked. Temperature 99°·8, pulse 78, a distinct fall from 104°·4, and 106°·1 of the evening of the visit. For the next seven days we have the gradual settling of the system into quiet, with occasional recurrences of fear.

Further pursuit of this case is impossible, as the friends insisted upon her removal at the earliest possible opportunity, feeling she would get stronger more quickly if at home. Unfortunate as this is, we have undoubted proof that the system was affected entirely through the mental condition of the patient. Throughout the entire illness in hospital there was not one symptom we could lay hold of to account for the condition in which the patient was, other than that the discharges became offensive.

The influence of such cases is felt throughout the entire ward in which they chance to be, and the proof of this is found in studying the temperature charts of any ward during the time any such case is confined in it. In the ward in which Mary W., second type quoted, was, there were other three patients. The average temperature of these three cases, taken over a period of twelve days, was 101°·6, 101°·8, 101°·8.

In the case of Eliz. Y., the average temperature of two patients, taken over a like time, in her ward, was 101°·1, 100°.

The connexion between such cases and an unsatisfactory condition of other patients is by no means imaginary; there is an influence which is of deep interest when we consider the institutions with which we are dealing.

5th Type.—There is yet another type of case, happily more limited than the others, but unfortunately not rare.

A woman, Mary B., single, was admitted into hospital and delivered. There was an unmistakable want of vigour in her system noticed on her admission, such a peevishness as led us to adopt rather an unsympathetic line of treatment towards her. In a day or two this case asserted its severity. The woman was seriously ill, yet nothing was evident. For ten days she lingered on, but finally succumbed, and throughout her illness no treatment had given us one gleam of hope. After death the story came. The father of her child had placed her in a railway train, intending, or leading her to think so, to accompany her here, and after delivery they were to have been married. As the hour of departure was up he left the carriage to get refreshments for the journey, and never turned up—another instance of cold, calculating desertion. The woman alone came to Glasgow, perfectly alone and homeless. The mental strain was too much for her, and she succumbed to it. No comment is necessary; the facts speak for themselves.

These are simply cases taken here and there, illustrative of grades of excitement and the results and influences of them. In one or other form they are almost never absent from the wards of our maternity hospitals, and from their very nature they are not to be met with in private practice. The victims leave home, or what has been home to them, and are lost in the lowest dens of our large cities, or seek refuge and secrecy under an assumed name in the wards of our lying-in hospitals, where they very sensibly swell the mortality.

Treatment is a subject upon which I cannot speak with authority; but indeed I do not think any line of treatment can or ought to be laid down. To meet them most successfully one must have a mind quick to detect the nature and cause of the cases coming under his care, and a disposition which has not developed that recent type of manliness which despises sentiment.

ARTICLE VII.—*An Accidental Experiment with Antiseptics.* By JOHN DUNCAN, Surgeon to the Royal Infirmary.

IT may seem, perhaps, a work of supererogation to put on record further proof of the value of antiseptic treatment; but there are so many difficult and apparently paradoxical facts connected with antiseptics, that whatever tends to settle the fundamental truth is worthy of note. The case I desire to bring before you illustrates rather the theory than the practice. It ought not to be forgotten that these are perfectly distinct and require separate consideration. The question of the antiseptic system of wound-treatment is frequently argued on both sides from a statistical point of view. Now, even putting aside the extreme fallacy of reasoning from limited numbers of cases in which percentages are seriously affected by trifling errors of forgetfulness or arrangement, and which are often far from *apropos*, it is evident that statistics can have little effect, from the multitude of disturbing causes, in determining the truth of the antiseptic theory. They may be used to illustrate, with more or less effect, the experience and care of the surgeon, his hygienic surroundings, the class of people he treats, the evils of hospitalism, and even the advantages of his mode of wound-treatment. But it is quite conceivable that the practice of the antiseptic system may be followed by the most beneficial results while yet the theory on which it is founded is a false one; and, on the other hand, it may be that the theory is profoundly true, while the practice based upon it may contain more of the injurious than of the beneficial, or may be injurious in some cases, beneficial in others, or, lastly, may owe what benefits or injuries it confers to some incidental chemical or mechanical or vital property, and not to its antiseptic qualities. We must work out the matter on two lines. We must first determine whether or not the difference between a compound fracture and a simple, a subcutaneous and an open wound, is due to the entrance of low forms of organic life in the one and not in the other; and, secondly, if that be determined affirmatively, we must discover the best mode of preventing their entrance. Notwithstanding many difficulties, I am unable to resist the accumulating scientific and experimental evidence in favour of the theory; and the case I have to lay before you seems to me to afford no loophole of escape.

Mrs C. M., æt. 45, was admitted to the Royal Infirmary on 14th June 1881, suffering from disease of the elbow and hip. There was a strumous and tubercular family history, but she had herself been a very healthy woman till six months before admission. Her left elbow had then, without known cause, inflamed and subsequently suppurated; and about six weeks before she came to Edinburgh her left hip had also become painful.

I found the elbow plainly in a quiescent state. The probe passed down to a small portion of rough bone at the outer condyle of the humerus; but there was little discharge, and the joint was fairly movable. With rest and other treatment it ultimately recovered.

In the left hip there were all the signs of inflammation of the head of the femur, and a large abscess could be felt over the anterior and outer part of the joint. Extension and the long splint were applied, and I aspirated the abscess. The pus was found to be thick and a little flaky. Seventeen days afterwards a certain amount of fluid had again collected in the abscess cavity. I determined to aspirate the fluid a second time. There now happened a misfortune which I have not met with before or since, and which, therefore, is easily avoided. Immediately before using the aspirator in the patient whose case I am relating, I employed it to evacuate an abdominal abscess in a man suffering from diffuse cellulitis after amputation for traumatic gangrene. The pus from that abscess was found swarming both with dumb-bell bacteria and with micrococcus chains and groups. The instrument was externally cleansed and smeared with carbolized oil, but no antiseptic solution was passed through it; and I remember that, in order to make sure that the abscess in Mrs M.'s case was completely empty, I passed the blunt stilet through the canula.

This second aspiration of Mrs M.'s abscess evacuated three ounces of thin sero-pus. Neither on this nor on the former occasion were organisms found, though carefully searched for both before and after staining with aniline violet. But the result was very different. The first aspiration had been entirely and markedly beneficial. After the second the temperature rose slightly the same evening; next morning was 101°; next evening 102°·5; and the morning after reached 103°·5. During that time the abscess rapidly became more and more tender, red, and distended. I again aspirated, and got pus loaded with organisms precisely similar to those in the other case.

Immediately a small opening was made sufficient to admit the nozzle of a syringe, and having completely emptied the cavity, I injected a little chloride of zinc solution, 40 grs. to the ounce, which was allowed to remain a short time; and I then repeatedly over-distended the cavity with 1 to 20 carbolic solution.

An ordinary carbolic gauze dressing was applied, which required daily renewal for three days. The drainage-tube was then removed, and in three weeks (the dressings being changed once a week) the abscess had healed. No organisms were again found after the washing out. The patient ultimately went home cured on 30th October.

It seems to me that we have here a case in which, as distinctly as if the experiment had been deliberately made, phlogogenous and pyrogenous results followed the inoculation of septic matter, and in which the use of agents calculated to destroy the organisms which were found to have developed also put an end to these untoward accompaniments of their presence. It is difficult to avoid the conclusion that there was here a relation of cause and effect. Nor would the case be vitiated by a failure to repeat the experiment in all its details. It is indeed unlikely that a similar treatment would frequently be equally successful, and it has risks which render the method in most cases of doubtful expediency. The success of the treatment will be rare, because the diagnosis of septicity is not always easy to make at so early a date, and because the crevices, sinuosities, and burrowings of abscesses generally render it difficult thoroughly to wash them out, and because later the surrounding parts become infiltrated with organisms. I am inclined, after many attempts, to think it impossible to render aseptic an abscess which has been long putrid except by scraping or cutting. Doubtless it is more feasible in abscesses which have recently become septic; but shortly after the case of Mrs M. I met with one in which I followed precisely the same method, and in which the risks of doing so were painfully illustrated. I had opened an abscess connected with the hip-joint in a lad of fifteen sent to the Infirmary by Dr Hardie. There were no organisms in the discharge, and it remained without them for some weeks. After one of the dressings, however, the temperature rose and local inflammation came on. Having ascertained the presence of organisms on the third day, I pursued with energy the treatment already detailed. It failed to destroy the organisms, and caused a rapid increase of inflammatory action, which ultimately necessitated amputation at the hip. The over-distention of the abscess cavity produced infiltration of the surroundings, and extensive cellulitis.

I am not prepared, therefore, to recommend the treatment which was followed; but I have thought it worthy of record as a very convincing proof of the truth of the antiseptic theory.

Part Second.

REVIEWS.

Lunacy in England (England's Irrenwesen): the Address read at the Opening of Section VIII., Mental Diseases, of the International Medical Congress. By C. LOCKHART ROBERTSON, M.D., etc., Lord Chancellor's Visitor in Lunacy, President of the Section.

Thomas Carlyle viewed Psychologically; and Mania Errabunda. Two Papers reprinted from the Journal of Psychological Medicine, Vol. vii. Part 2. By W. A. F. BROWNE, LL.D., formerly Medical Commissioner in Lunacy, Scotland.

Complaints by Insane Patients. By J. A. CAMPBELL, M.D., F.R.S.E., Medical Superintendent of the Cumberland and Westmoreland Asylum, Carlisle.

Chemical Restraint in the Management of the Insane. By H. B. WILBUR, M.D. New York: Putnam: 1881.

Dr LOCKHART ROBERTSON filled the chair of the eighth section of the International Medical Congress with great ability, dignity, and urbanity, and his opening address was worthy of the occasion. It appeared in the *Lancet* of 6th August, and has also been published in the *Journal of Mental Science* for January, and the *Journal of Psychological Medicine*, vol. vii. part 2, a reprint of which has been sent us for review.

Dr Robertson's address is simply a brief statement of the present condition of the insane in England, and of the manner and method of their care and treatment, interspersed with remarks upon the comparative value of disposing of the insane, and considerations as to the nature of the legislation which is generally believed to be imminent. He wisely remarks that the whole future efficiency of the English county asylums depends upon the right adjustment of the relative control given to the local authorities through the new county boards, and to the central government through the Commissioners in Lunacy.

It would be difficult to make any quotations which would give a proper idea of the value of Dr Lockhart Robertson's address. It should be viewed and read as a whole, and none interested in the important subject on which it treats will be satisfied unless they have read it. On some points we should certainly like to have his opinion at greater length. He tells us that 43 per cent. of the private —*i.e.*, non-pauper—patients of England are in private asylums, and remarks that the "friends of many patients in England distinctly prefer them to public asylums, and some patients, who have had experience of both, contrast the personal consideration and study of their little wants which they receive in private asylums with the discipline and drill of the public institutions. I see no reason why private asylums should not continue to exist side by side with the public middle-class asylums. Time and competition will show which system shall ultimately gain the approval of the public."

Is it necessary that the public should ever come to give exclusive support either to public or to private asylums? Can it not continue to use them both?

"If private asylums are to continue," Dr Robertson observes, "there should be entire freedom of trade in the business. The Lunacy Commissioners have for many years placed endless impediments in the way of licensing new and small asylums in the metropolitan district. I entirely differ from this policy, and I think that small asylums for four or six patients, licensed to medical men, would tend to lessen the existing evils of the larger private asylums. The monopoly which the Commissioners have established in the metropolitan district has certainly not raised the asylums there to a higher standard than those of the provinces, where free trade in lunacy prevails. I am tempted to say that it has had the contrary effect."

Dr Lockhart Robertson does not clearly indicate what the existing evils of the larger private asylums are; but the common argument is that there is an overpowering temptation for the proprietor of a private asylum to imagine it to be his interest to detain the patient longer than is needful for the purposes of his entire recovery. At any rate Dr Robertson clearly shows that he holds that the physician's remuneration ought to be a fixed salary, and not the difference between the payments made by his patients for board and lodging and the sums he may expend on their maintenance. But if the Lunacy Commissioners have so little faith in the honesty of the proprietors of the private asylums, we cannot see how they are illogical in refusing to license small asylums. The fewer patients a man has, the greater the temptation to detain one of them longer than should be. The proprietor of a private asylum who has thirty patients, and is allowed to take as many more as he can find accommodation for, would lose relatively less than a man who had a license for six patients and could not increase the number. At the same time, by erecting a virtual monopoly in the metropolitan districts by refusing to give a license to new asylums, they strengthen the position and increase the income of the established proprietors, and render them less prone to yield to shortsighted and sordid considerations. We do not, however, believe that the doctors of the private asylums are either so foolish or so wicked as to yield to so gross a temptation.

In 1877 Mr Dillwyn had his select committee, when great inquiry was made into this accusation as to the undue detention of lunatics in private asylums. The result was that no instance of the kind could be established; the alleged cases all broke down. This, of course, made no impression on the mind of Mr Dillwyn, who had got up the inquiry. Last year he introduced a bill into Parliament directed against private asylums, just as if his accusations had been proved instead of being refuted. As Otway says, "Beware of the man whose spleen is heavier than his brains."

To force all the insane, not rich enough to pay for skilled private care, into large public asylums, merely to secure for them the benefits of committee government, would, in our opinion, be an unfortunate step which could not easily be retraced. It would only increase the Chinese sameness which is already too prevalent in the treatment of insanity.

The following passage will be read with interest, coming from one of Dr Robertson's ripe experience:—

"It is more than twenty years ago since the question of the needless sequestration of the insane was first raised in England by my friend Baron Jaromir Mundy of Moravia. He spoke then to dull and heedless ears. I remember well I thought him an amiable enthusiast, and I said there was no fit or proper treatment for the insane to be found out of the walls of an asylum. I have since learnt a wiser experience. Well did he say, on leaving us, *Arbores serit diligens agricola quarum fructus nunquam aspiciet.* I am very glad to have this opportunity of doing honour to the zeal and far-seeing wisdom of the first preacher of the new crusade; would he were here with us to-day to accept my formal adherence to his cause.

"There is, I believe, for a large number of the incurable insane, a better lot in store than to drag on their weary days in asylum confinement:—

> 'The staring eye glazed o'er with sapless days,
> The slow mechanic pacings to and fro,
> The set gray life and apathetic end.'"

The two papers on "Carlyle viewed Psychologically" and on "Mania Errabunda" show that Dr Browne has lost none of his rare skill in writing, and retains in his venerable age the power of his fine intellect. Dr Browne has been an indefatigable contributor to the *Journal of Psychological Medicine* since it was started a few years ago. The essay on Carlyle is, in our opinion, a most able and discriminating estimate of the character and range of that eccentric genius. In "Mania Errabunda" Dr Browne treats of that form of impulsive insanity which leads the patient to wander forth from his home without any other purpose than to run or rush forward, generally in a straight line and across all obstacles.

The only paper, save the president's able address, read before the annual meeting of the Psychological Association, held at London on the same week as the Congress, was one on "Complaints by Insane Patients," by Dr T. A. Campbell, of which we have to acknowledge a reprint from the *Journal of Mental Science* for October 1881. The subject, in itself an important one, was naturally interesting to an audience consisting mainly of superintendents of asylums, and it was a cause of regret that the discussion upon the paper had, from want of time, to be deferred till the next meeting. Dr Campbell shows by some striking examples that it requires a good deal both of experience and native acuteness to arrive at the truth of the accusations so frequently made by the insane against those who are entrusted with the charge of them, accusations which can be neither safely disregarded nor lightly entertained.

Dr H. B. Wilbur, in company with Dr W. Hammond, Dr Spitzka, and other eminent neurologists, has for several years back kept up a lively war with the medical superintendents of the asylums in the United States. Dr Wilbur and his allies assert that restraint is used to a hurtful extent, and wish that the American asylums should be administered more after the fashion which prevails in Great Britain. Finding that those most in favour of restraint made use of the assertion that the British superintendents in many instances only substituted stupefying drugs for straps or camisoles, Dr Wilbur made a series of inquiries amongst the British and American asylums. The results may be given in his own words:—

"First, the use of sedatives and narcotics, the so-called 'chemical restraint,' is not the substitute or alternative for mechanical restraint either in British asylums or in the two or three American asylums where the principle of non-restraint has been lately on trial. On the contrary, the general rule seems to be: the more mechanical restraint, the more chemical restraint.

"On reflection, this need not surprise any one. For if, as one American superintendent states it, 'rest is vital to successful treatment of acute mania,' mechanical restraint will not suffice, as it merely limits the range of muscular action, neither fully controlling the patient's efforts nor quieting the violent and exhausting action of his vocal organs. Till some ingenious superintendent shall invent a protective gag and still more efficient appliances of restraint, resort must be had to sedative drugs to secure the vital rest. And so one superintendent writes that the narcotics he gives are not as substitutes for restraint, but in some cases associated with restraining apparatus.

"Secondly, it appears that the British superintendents who have furnished these statistics not only do not regard such remedies as proper substitutes for mechanical restraint, but rather look upon their general use as unnecessary and even pernicious. Some of them even assert that such use protracts or perhaps prevents the recovery of the patients.

"Thirdly, it will be seen from the opinions of the British superintendents, given in connexion with the tables, that non-restraint, as held and practised by them, is no inflexible dogma. It is simply the practical disuse of restraining apparatus, because they have found by experience that other means and resources are better for the patient, except in very rare instances, in which event they would unhesitatingly accept the alternative."

To the best of our knowledge, narcotics are not given to any large extent in British asylums; indeed, it is becoming a matter of pride to proclaim that very little such medicine is dispensed to the patients. So far, we think, Dr Wilbur is right in his contention. Whether opium, hyoscyamus, bromide of potassium, chloral, and other such drugs are useful in certain forms of insanity, or, as some assert, really retard recovery, is a most important question, which we cannot discuss at present. We should be sorry if, instead of being left free to consult the exigencies of each case, the physicians of asylums should feel pushed by an external pressure to gain the goodwill of the Commissioners in Lunacy, or to exalt themselves in the eyes of the public, by discarding means of treatment which they would otherwise be inclined to employ. Dr Wilbur also shows that, as far as he can get returns from the American asylums where restraint is more frequently employed, suicides are four times commoner than in the English ones. He tells us that in the New York State Asylum at Utica, during the last seventeen years, there was one suicide to every fifty-six deaths; in the Newburgh asylum, one suicide to every twenty-eight deaths.

Dr Wilbur is a powerful controversialist, careful and measured in his language, polished in his demeanour, but steady and persistent in attack. This pamphlet, which originally appeared in the *Archives of Medicine,* delivers a vigorous blow against the American advocates of restraint.

The Works of Abraham Colles. By ROBERT M'DONNELL, M.D., F.R.S. London: New Sydenham Society: 1881.

WE are much indebted to the New Sydenham Society for reproducing the writings of one who adorned the profession more than half a century ago. Few even of the older surgeons will remember Mr Colles, though he was an outstanding man in his day. None who read his memoirs will fail to do honour to his memory. These papers should be specially interesting to us, seeing Abraham Colles was an M.D. of Edinburgh, which degree he obtained in 1795, after studying two years in our Scottish metropolis. He settled in Dublin, and there attained to the highest position as a surgeon and teacher, which he held till his death in 1843. He seems to have been a man of rare attainments and powers, as evidenced by the writings he has left.

In these days, when the treatment of syphilis by mercury is still a subject of difference among surgeons, the reproduction of Mr Colles's carefully recorded observations on the manifestations of the disease and the effects of the remedy are most interesting and instructive.

There are many quotations which we would like to give here, but space will not permit us.

Mr Colles was an advocate for small doses,—not, perhaps, what we would call small doses, but what were undoubtedly small for the period in which he lived, when patients were salivated over and over again as an ordinary thing. He advised that the mercury should be given when the eruptions began to come out; that, if given before, it did not prevent secondary manifestations, but only delayed them; that the mercury should be pushed quickly till the mouth was *touched;* that whenever salivation was reached the eruptions were at once affected, and that they disappeared more quickly and permanently than if not thus treated. Now, in all this, those who still have faith in the beneficial effects of mercury on syphilis will agree. Mr Colles did not evade the fact that the careless and unscientific employment of mercury has often produced harm; but for this, he has very justly remarked, the mode of administration (or, perhaps, rather the administrator), and not the medicine, is to blame.

The most interesting chapter is that on syphilis in infants.

The number of fresh observations and valuable practical deductions here is remarkable. In fact, Mr Colles has placed the subject very much in the position in which we find it at present. He has defined our knowledge so exactly that Mr Hutchinson has referred to his deductions as "Colles's law." These deductions are four in number,—*First*, that a mother bearing a syphilitic child may have no apparent manifestation of infection, and yet be infected sufficiently to prevent her taking syphilis off her child. *Second*, from such and similar cases it is evident that one attack of syphilis, however slight, protects against a second. *Third*, a child may receive infection from sucking a nurse, but only when the nurse has ulcers (or some other broken and discharging surface) on the nipple. *Lastly*, from the observation of such cases Mr Colles came to the conclusion that secondary symptoms are capable of transmitting syphilis. One cannot read these memoirs without noticing how far the author was in advance of his age. Many of his descriptions of constitutional manifestations are very graphic, and quite worthy of having been written in the present day.

The last of the papers is the well-known one on fracture of the lower end of the radius, commonly described as Colles's fracture. The description of this fracture is most interesting and exact. The only point in which there is a difference from modern pathology is in regard to the site of the fracture. He placed it too high up, describing it as an inch and a half above the carpal extremity of the radius. Now we know that the fracture most frequently takes place obliquely, being farther from the articular surface on the posterior than on the anterior aspect. In no case have we seen the fracture as far as an inch and a half from the articular surface; but on the living subject the fracture always *seems* to extend for a greater distance on the dorsal aspect than it really does. Mr Colles's method of treatment with two *narrow* splints and a pad on the palmar aspect at the site of fracture would amount almost to the modern method by flexion.

We commend the volume as full of most interesting and instructive reading, and a valuable addition to any library.

Diseases and Injuries of the Eye. By J. R. Wolfe, M.D., F.R.C.S.E.
London: J. & A. Churchill: 1882.

This book occupies a position between a systematic treatise and a series of clinical lectures. It professes to be a *résumé* of the course of lectures which the author has been in the habit of delivering to his students at the Glasgow Ophthalmic Institution. On this account, as an exhaustive series of lectures on ophthalmology is not included amongst the studies necessary for graduation, the author may be pardoned for numerous omissions which would be inexcusable in a systematic treatise. But having allowed himself 450 pages, a little more might have been said about such important subjects as gonorrhœal ophthalmia, sympathetic inflammation, the relative diagnostic importance of different forms of amblyopia, the diagnosis of foreign bodies in the eye, and not a few others. The whole subject of gonorrhœal ophthalmia is dismissed in little more than half a page, from which we extract the following:—"Treatment must be very prompt. Warm fomentations should be used, and a weak solution of lunar caustic painted with a camel-hair pencil over the palpebral conjunctiva, and washed off with another pencil dipped in a solution of chloride of sodium. When the discharge gets more abundant we must have recourse to the same treatment as in infantile ophthalmia." This is all as to treatment. No precautions to be taken for the other eye! No question as to the danger of excessive chemosis! How often is it possible to evert the lid and paint it with nitrate of silver until most of the mischief is achieved or the chief danger passed? The present state of our knowledge with regard to sympathetic ophthalmia is surely sufficiently advanced to enable us to discriminate between what are the most serious and intractable forms of inflammation and what forms are likely to subside on enucleation of the other eye; but there are no considerations of this kind in Dr Wolfe's book. The student is left with the impression that sympathetic ophthalmia is as invariable in its nature as whooping-cough or measles.

Though we do not consider that Dr Wolfe's book will be found to meet the requirements of beginners, or take the place of such excellent little practical manuals as those of Lawson and Nettleship, we would recommend its perusal by more advanced students, as it contains very full accounts of many fanciful and even ingenious operations which are not described elsewhere. More especially we would call attention to the remarkable method of treating granular ophthalmia, which, if it prove as successful in the hands of others, must be looked upon as a brilliant addition to ocular therapeutics.

Elements of Pharmacy, Materia Medica, and Therapeutics. By WILLIAM WHITLA, M.D., Physician to the Ulster Hospital for Sick Children, etc. London: Henry Renshaw: 1882.

THE author tells us in the preface that "the aim of this little work is to give the student of medicine such information in a concise form as he generally has to sift out of two or more of the larger manuals." He also mentions that "it is not the intention of the writer to presume that this work will take the place of any of the many valuable volumes which have been written on materia medica and therapeutics." In this latter supposition the writer is correct.

The arrangement of the work is such that it can never become a text-book; and this being the case, it is very doubtful if it will ever become a favourite book with students. The volume has many excellences, but, being arranged alphabetically, can only be used as a work of reference; and when a work of reference is required, some other is likely to be chosen.

The work is in five parts. I. Pharmacy. This part is well written, and contains much useful information. II. Materia Medica. This part contains the officinal medicines of the British Pharmacopœia, arranged alphabetically, and their preparations. These are, for the most part, correctly given; but the author, in stating the chemical formulæ constantly in the case of crystals, forgets to give the water of crystallization. For example, $CuSO_4$ is not "a blue crystalline salt in oblique prisms." So, too, with all the others. This will be very misleading to students. In many instances the descriptions of vegetables will be found very defective. This part also contains a list of several medicines more or less used in the treatment of disease, but which are not officinal in the British Pharmacopœia, although many of them are officinal in the United States Pharmacopœia and some others. This part will be found both interesting and instructive, but the printing of these substances in *red ink* does not add to the attractiveness of the volume. The author here falls into a curious mistake in supposing that the much-used *Santali Flav. oleum* is obtained from the *red* sandal-wood. The *red* sandal-wood is only used in medicine as a colouring agent, and is derived from the *Pterocarpus santalinus*, a plant of the Leguminosæ, whereas the *Santali Flav. oleum* is obtained from *yellow* sandal-wood, the product of *Santalum album*, a tree belonging to the Santalaceæ, a very different class of plants. III. Therapeutics. This chapter is, on the whole, concise and well written, but, being arranged alphabetically, can only be used as a work of reference. IV. The Administration of Medicines. V. Pharmacopœial Reactions and Tests. In future editions, by arranging systematically Parts II. and III., and giving fuller descriptions of many of the vegetable articles of the materia medica, Dr Whitla may make this a useful manual to students.

Science and Culture, and other Essays. By Professor HUXLEY.
London: Macmillan & Co.: 1882.

THERE can be no doubt that Professor Huxley exhibits a good deal of the "Mr Evergreen" in his constitution. At an age when the labour of making books generally begins to pall on even the professed *litterateur*, we find the Professor as hale and hearty as ever, dealing blows to right and to left with all the old polemical activity, and saying caustic things in well-turned sentences with his accustomed vigour. Of course, to collate addresses and magazine articles, which have been ten years or so in attaining their evolution into book-form, is by no means a difficult task; yet it is not every man's detached works which follow him to his credit. In the present volume we find thirteen essays, all of them containing food for thought; most of them interesting; a few polemical, more or less; and several containing the usual "strong meat" wherewith the Huxleyian intent delights to fortify and shock the "men" and the "babes" respectively. The essays on "The Method of Zadig," on "Certain Errors respecting the Structure of the Heart attributed to Aristotle," and on "The Border Territory between the Animal and Vegetable Kingdoms," present us with probably the author's happiest attempts to make clear and plain to the ordinary lay intellect the truths and facts of biology. The first-mentioned essay is particularly happy in its method and in its style; and few persons who read it attentively will fail to grasp the nature of the evidences which the palæontologist collates respecting the life of the past. No less clearly put is the case for the biologist, with his puzzling task of separating animals from plants, in the essay on "The Border Territory;" whilst the paper on Aristotle and the Heart is an exposition of the correctness of the father of natural history in his description of the heart as that organ was presented to view in the primitive dissections of classic days. Amongst the polemical papers of this volume is that "On the Hypothesis that Animals are Automata,"—a discourse which, it will be remembered, set Belfast in a flame in 1874, when the so-called heresies of Descartes were propounded in that city on the occasion of a British Association meeting. "The Coming of Age of the 'Origin of Species'" was given as a Royal Institution lecture in the twenty-first year after the publication of Darwin's classic work, to which, as everybody knows, Huxley acted as godfather. Times are changed, of course, since our author wrote of the "old ladies of both sexes" who settled Darwin in 1859 at their tea-tables; and it is interesting and edifying to read the quietly jubilant strain in which the majority of the "Origin of Species" was celebrated at the Royal Institution. The paper on "Evolution in Biology" is a reprint from the *Encyclopædia Britannica*, and gives a fair *résumé* of the evidences upon which the theory of evolution rests. More technical in tone is the essay on "Sensation and the Unity of Structure of the Sensiferous Organs;" but the physiological deductions concerning the unity of type in the sense-organs are of the highest scientific interest, and are carefully treated by Professor Huxley. The popular reader will be certain to linger over the essays on "Joseph Priestly" and on "Science and Culture;" whilst in the paper read at Birmingham, on "Elementary Instruction in Physiology," our author gives a clear statement of what is wanted for the successful education of boys and girls in physiology, and concludes his essay by a powerful comparison of the illegal "pains" of a frog (used to show the circulation of the blood in the web of its toes) and the legal "pleasures" of the same animal used as a bait for pike. The concluding essay, on "The Connexion of the Biological Sciences with Medicine," was delivered at the Medical Congress last year. It is as suggestive a piece of writing as exists in the volume before us, and supplies abundance of argument against the notion that medicine and biology possess no relations in common. The present volume we can thoroughly commend to the notice of our readers. It is full of suggestive thought, and will at least form a lively and entertaining companion for the leisure hours of the professional man.

Familiar Science Studies. By RICHARD A. PROCTOR. London: Chatto & Windus: 1882.

MR PROCTOR is certainly one of the most industrious of the popularizers of science in our day. He has the rare gift of making plain and interesting, as well as attractive, the more abstruse topics with which the scientist alone is capable of dealing, as a rule. Moreover, Mr Proctor is careful never to sacrifice correctness to popularity, and this latter feature is one by no means the least meritorious in any writer professing to advance popular culture. His latest work is a collection of essays which have appeared in the magazines, but which certainly deserved to be rescued from the inevitable oblivion that awaits detached papers. The reader is presented with a most varied bill of fare, and it will be his own fault if he rises without instruction from Mr Proctor's pages. The famous essay on "A Menacing Comet," which so perturbed the mind of the *Spectator* and the Bishop of Manchester, is included in this volume, and readers will feel interested in seeing for themselves how far Mr Proctor's views have been misrepresented both by the pulpit and the press. The papers on the "Pyramids," and those dealing with "Meteoric Dust" and "The Origin of the Week," are amongst the most entertaining in the volume; but we must not neglect to note the articles on "Sun-Spots and Panics," and on "Our Winters," as equally entertaining. In addition to the purely astronomical papers, Mr Proctor deals with topics such as "Lotteries" and "Betting on Races," treating these subjects from a scientific standpoint, and succeeding in investing these unpromising matters with a large modicum of interest. Physiological topics are not neglected, for we also find articles on "Dreams" and "Suspended Animation," which show that Mr Proctor has studied the mental side of life-science to some purpose. Altogether, such works as that under review, accomplish a good end in bridging over the gulf between the purely scientific side of culture and the literary aspect; and we are certain that Mr Proctor's new volume will not only accomplish good educational work, but will add to his already well-known reputation as a scientist and as an expounder of the technicalities that too often deter laymen from scientific studies.

Archives of Laryngology. Vol. II., No. 4. New York: G. P. Putnam's Sons.

THE first paper in this number is by Dr Andrew A. Smith of New York, entitled "Neuroses of the Throat." In it the author describes two of these—1, Neuralgia; and, 2, Deceptive sensations in the throat, the so-called fulness in the throat, which he considers due to a slight paresis of one or more of the muscles of the part, and which he has cured by the use of strychnia and galvanism. The next article is by Dr Beverley Robinson of New York, "The Laryngeal Affections of Pulmonary Phthisis." The author, from his clinical experience in the city of New York, thinks tubercular laryngitis to be a rare disease, and states that miliary tubercle but seldom occurs in ulcerative phthisical laryngitis. This is contrary to the opinion and writings of most authors, and he says there are two ways to reconcile these apparent discrepancies. The first "is to agree upon the exact definition of what shall be called a tubercular lesion;" the second, "to recognise the fact that types of diseased action vary in different countries, and that a particular disease may not resemble closely the same affection in another and perhaps distant land." He further, in support of his opinion, remarks that in his experience tubercular disease is more frequent in London and Paris than in New York, and that it attacks organs in these places which it does not in the latter city; and again, that true miliary tubercles are not found so extensively in that city as in Europe. He also considers the type of pulmonary and laryngeal affections in America to be chiefly catarrhal in their nature. Dr Robinson advocates careful local treatment.

Dr W. Porter of St Louis presents a short article upon "The Prognosis of Laryngeal Phthisis," giving his opinion that such cases are not necessarily fatal, as is supposed by most. He details shortly three cases in which there were physical signs of changes in the lymph of a phthisical nature, as also in the larynx. These recovered under treatment. At the same time he states these are exceptional results in his experience. Dr Bosworth of New York gives "A Case of Tubercular Ulceration of the Tongue." He describes how he could easily see there the identical changes occurring which take place in the larynx when in a like way affected. The appearance of the ulcers is identical, and his observation of the course of the ulceration enabled him to satisfy his own mind that the ulcers in the larynx are not due to the primary deposit of tubercle, but are of inflammatory origin; and that if the tubercles play any part in the process, it is only a secondary one. The last article is a "Contribution to the Normal and Pathological Histology of the Cartilages of the Larynx," by Dr Louis Elsberg, New York.

A considerable portion of the number is taken up with a report of the proceedings of the subsection, Diseases of the Throat, at the late International Medical Congress held in London during August last.

Transactions of the Medical Society of the Grant Medical College, Bombay. 1879-81. *Passim.*

We have received from a correspondent a set of reports of the monthly meetings of this apparently active and flourishing Society. We notice considerable originality and freshness in the views propounded and some of the operative interferences recommended. More care ought to be bestowed on the editing of the reports, as both the English and the Latin are apt to be a little slipshod. The Latin especially would indicate that the plan lately adopted of allowing a candidate to profess some native language other than his own in the preliminary examinations, instead of Latin, is already bearing bitter fruits.

Proceedings of the British National Veterinary Congress, 1881. Part I. Printed by Hazell, Watson, & Viney, London and Aylesbury.

We think all veterinary surgeons will congratulate themselves on the publication of this very full and carefully compiled report of these interesting and important proceedings. The small volume before us contains a mass of highly interesting details, which derive additional importance from the fact that they represent the experience of some of the most distinguished members of the veterinary profession. This manual is, in its way, a very handy compendium of the most recent veterinary practice.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING V.

Wednesday, 1*st March* 1882.—Dr G. W. Balfour, *President, in the Chair.*

I. *Mr Joseph Bell* showed a PATIENT who had suffered for some years from disease of the ankle-joint, but whose foot he had been enabled to save by means of a free antiseptic incision. He thought it was comparatively rare that good results were seen in cases of joint-disease of long standing. This patient, a young lad æt. 19, had suffered from pain in the ankle for nearly five years. For the last two years the pain had been intense. He was unable to put his weight on it, and sometimes was even unable to sleep at night. The disease, he found, was entirely confined to the ankle-joint, and he was afraid amputation might be necessary. After a consultation with Dr Duncan, he thought it advisable to try the effect of a free opening and thorough drainage under antiseptic precautions. The incision was made on the 1st of December. An ounce and a half of pus was let out, and a drainage-tube passed into the joint. The symptoms were at once greatly relieved. Patient remained in hospital about two months, and was sent out with the wound healed and a starch bandage on to keep the joint quiet. This was now off, and they could see that the movements at the ankle were almost perfect, and there was no evidence of disease—a very satisfactory result. The lad wished to go about without his crutches, but he would advise him to be very careful for some time yet. It was good to note failures as well as successes. Just about the same time he tried the same plan of treatment on a man a little older than this patient, but with similar symptoms. The result was not at all satisfactory, and he had to perform Syme's amputation, after which the case did well.

II. *The President* showed a CASE which he believed to be one of aneurism of the ductus arteriosus. He had already seen four cases of a similar character. The first had been many years under observation, and was first seen by Dr Begbie, senior, then by Dr Warburton Begbie, and by himself, and all three had arrived independently at the same conclusion. Another had been for some time in the old Infirmary here. She subsequently went to the Royal Infirmary, Glasgow, where a similar view was taken of her case, which Dr Wood Smith had published in the *Glasgow Medical Journal,* after exhibiting the patient at the Medico-Chirurgical Society there. The third case was the patient of a medical man in Edinburgh, who had promised to bring her before the Society. His present patient, a young girl, had not been admitted to the Infirmary for heart mischief, but while in the ward she was found to labour under several cardiac defects, apparently of congenital origin, and amongst them were those signs he regarded as distinctive of this form of aneurism. In the second intercostal space, close to the right side of the sternum, there was a limited but forcible pulsation. Over this pulsation a very rough purring thrill was to be felt, and a loud bruit was audible. This thrill and bruit were largely systolic, but also extended into the diastole, the one portion being separated from the other by a well-marked second sound. There was no affection whatever of the lungs, but the murmur was propagated through the aorta in every direction, not only onwards with the blood current, but upwards and backwards into both carotids and into the ascending aorta, apparently by means of vibrations of the coats of the vessel. There were other murmurs present in this case, the heart being otherwise congenitally malformed, but he would go more fully into the case upon another occasion. One object in exhibiting this patient was to recover a lost reference to a similar case published within the last six years in a German journal, and quoted in an English one, along with a woodcut of the post-mortem appearance of the parts involved. He would be grateful to any one who would supply this reference.

III. *Dr Buist* showed the HEART and BRAIN of a man who died three weeks before from apoplexy. He was a brewer, 65 years of age, and had been under observation for four years. At the end of 1878 he suffered from repeated attacks of vertigo, two of which were so severe that he fell. He had also mitral disease of the heart, but there was no dropsy. At that time he was forgetful and slow of speech, but quite intelligent. About twelve months ago he had an attack of cardiac dropsy, which yielded easily to treatment. He had now become much more forgetful and stupid, but he knew what he was about. His mental state after this got gradually worse, until he became quite childish. Towards the end of last September he had an apoplectic attack during the night, and in the morning he was completely hemiplegic on the left side. He gradually recovered the use of his left leg, but the arm remained permanently disabled. His speech was indistinct, and his memory was nearly lost. This state of matters continued till the 10th of February, when he suddenly became comatose and sank. During his last illness the disease of the heart gave no trouble. Dr Buist attributed the symptoms to cerebral hæmorrhage or embolism, and expected to find cerebral softening on the right side. As far as his examination of the brain had gone, he had not found anything to account for the hemiplegia, the chief morbid appearance being marked dilatation of all the ventricles, which contained about four ounces of serum. The cone diameter of the mitral orifice was 0·6 inches. Further examination of the brain revealed the presence of an old apoplectic cyst, about the size of a pea, in the white matter of the island of Reil, on the right side.

IV. *Mr Chiene* showed a MECHANICAL TONGUE-DEPRESSOR, invented by Dr Fergusson of Peebles, and made by Mr Young. It was very useful in removing tonsils or performing other operations about the fauces. It consisted of a chin-piece and tongue-plate, the tongue-plate being fixed to a ratchet which was worked by means of a spring attached to the chin piece. The instrument did not require an assistant or one of the operator's hands to keep it in position. Simple in application, not likely to go out of order, easily removed, it seemed to fulfil in a marked degree the essentials of a mechanical tongue-depressor.

V. *Mr Chiene* then read his paper on CRANIAL INJURIES, which will appear in a future number of this Journal.

The President said the Society were greatly indebted to Mr Chiene for his most interesting and instructive paper. It was an attempt to unravel the physiology of the brain through surgical pathology, a mode of vivisection which no one could interfere with, and which was carried out on those animals in whose structure and functions they were most interested. He was specially interested in the direct venous pulsation noted in one of the cases. This was primarily due to dilatation of the arterioles, depending in this case on shock. A direct venous pulse was, however, almost unknown in shock, because of the almost constant failure of the heart in such cases. In this case, however, there had been forcible pulsation of the heart, evidently due to irritation of the vagus, and the congestion and hæmorrhage into the lungs were obviously due to the same cause. The forcible heart-beat sent the pulse-wave right through the arterioles into the veins—a phenomenon with which they were sufficiently familiar in aortic regurgitation, but one which could not but be extremely exceptional in cases of surgical shock.

Dr Brakenridge said Mr Chiene had so exhausted the subject that little remained to be said. They were much indebted to him for the careful way in which he had brought the cases and the lessons they taught before them. It was not for him to say anything on the specially surgical points of the paper, but doubtless, by a proper attention to such symptoms as Mr Chiene drew attention to, and so by a careful localization of injuries, a field would be opened up for more efficient treatment. Such cases would tend to make localization more definite in future. They illustrated the opportunities surgeons had of confirming the investigations of physiologists on the lower animals, and also of correcting and adding to knowledge derived from that source. Indeed, if the anti-vivisectionists came to have their own way, they might be shut up to this method of acquiring such knowledge. He had had the privilege of seeing two of the cases with Mr Chiene, and could verify all that he had said. The only criticism he would offer was, that in his opinion the injured area in the case of the little boy was larger than Mr Chiene had represented it in his diagram of the adult brain. This case illustrated beautifully the correctness of Ferrier's observations. As the effect on the different areas passed off, the symptoms characteristic of irritation of these areas also passed off. He might say that the boy had been handed over to his care by Mr Chiene, that he was not altogether well yet, and he intended, with Mr Chiene's permission, to draw attention to some other features in his case on a future occasion. With regard to the third case, that of the gunshot wound, he thought Mr Chiene had not sufficiently emphasised the remarkably little interference with the intelligence. It was remarkable, considering the track of the bullet, that the woman was so intelligent. The other case, which he had not seen, was interesting as confirming the view that in the first case the facial paralysis, the aphasia, and paralysis of the tongue were due probably to the bloody serum passing down the fissure of Rolando. The movements on the same side of the body as the lesion were, he thought, probably due to a similar cause to those seen very often on the unaffected side in a hemiplegic attack, an irritation of the opposite side, rather than to any unknown communication existing between the affected side of the brain and the limbs on the same side. It was of importance, he thought, that such investigations should be followed out by surgeons.

Mr Joseph Bell thought Mr Chiene's paper a model of what such communications ought to be. He agreed with what Dr Brakenridge said regarding surgeons pursuing such investigations, but he wished to point out that very often the lesions they met with were too gross to allow of such careful localization. A case had come under his notice a few days ago where a poor young gentleman, in a fit of depression, shot himself through the brain. He had held the pistol close to his forehead, so that instead of the track of the bullet being a nice narrow one, as in Mr Chiene's case, part of the powder had done its work of exploding within the cranium, and reduced a considerable portion of the brain, so far as could be made out by the finger, to a soft pultaceous mass. He removed several small portions of bone, and a piece of bullet that had been chipped off, from near the surface of this mass. He regretted to say that he was unable to tell them anything about the track of the bullet, as the friends refused leave to examine the head. It would hardly be credited that the Procurator-fiscal had yielded to the persuasions of the relatives not to order a post-mortem examination in a case that might have involved grave criminal proceedings. Every chance of a careful examination in such cases is of vast importance to enable us to give decided opinions when consulted in the witness box on similar cases of murder or attempted murder. As to the symptoms in the case, there was no indication of any paralysis whatever. The pupils were equal, the face was calm and quiet. There seemed to be a peculiar spastic condition of both hands. He died in a few hours, the temperature having risen in the meantime to 108°·4, and shortly after death to 108°·6. It might seem to put him in the position of an *advocatus diaboli* as regards Ferrier's areas, but he should like to ask how it was that sometimes very extensive lesions of the brain occurred without any of those symptoms mentioned by Ferrier being noticed. He had had under his care at least two cases in which, after extensive head injuries, a considerable portion of brain substance was lost, but in none of them were these symptoms observable. In one of the cases a day and a half of memory seemed to have been lost—*i.e.*, he did not recollect anything that occurred for thirty-six hours before he met with the accident.

Dr M'Cormack of Kentucky said he had listened to Mr Chiene's paper with great pleasure, not only on account of the intrinsic merit of the paper itself, but also as an additional evidence of the careful and painstaking character of the work done by the medical men of Edinburgh. The profession of this city had always exerted a great influence on his side of the water, and he was glad to say, as an American, that everything he had seen here went to prove that the glorious heritage left by Simpson and Syme was in worthy hands, and that even in the short space of time which had elapsed since their day advances had been made and results secured of which they never dreamed. There was a fascination about the researches of Ferrier which none could escape who followed them, growing, no doubt, largely from the fact that they seemed to promise to throw light into a very dark field. He was free to confess that he had not improved opportunities presented by cases of injuries to the brain by so careful an analysis as Mr Chiene had done in the three cases he had detailed, and he was almost sorry to say that his cases had in the main seemed to have very little regard for these charts. While the paper was being read, he had called to mind a case which came under his observation a few months ago, where there was no sort of proportion between the extent of the injury and the symptoms produced. A healthy, strong man, aged forty years, was stooping in front of a circular saw, and had his head ripped open by it. The saw entered in the squamous portion of the temporal bone on the right side, and cut almost directly across to a corresponding point on the opposite side. The head must have rolled before the saw as it cut through, for the wound in the centre of the brain was not as deep as the angles of the external wound indicated. The membranes were torn away to the full size of the wound in the skull, and quite a furrow was ploughed through the cerebral tissue of both hemispheres. There was comparatively little hæmorrhage. A neighbouring physician had removed the spiculæ and rough angles of bone and dressed the wound; and when the doctor arrived a few hours later, the patient was half propped up in bed, playing with his child. The special senses were all intact, the mind was clear, there was no paralysis, not a symptom, in short, to indicate the fearful wound he had received. Inflammatory symptoms come on very slowly, and he remained in this negative condition for three days, at the end of which time he became comatose, and died without the development of any symptoms by which the brain lesions might have been located. He did not speak of this case because there was anything peculiar about it, but rather because there was not. Cases more or less like it were common in the experience of all surgeons, and all had been impressed by the variety of symptoms produced in different cases by wounds in the same locality, and by the frequency of wounds of the upper part of the hemispheres particularly, which, when not attended by pressure, produced no distinctive symptoms at all. For this reason we must not look for immediate results in these investigations. Their value would have to be tested at the bedside and by the careful comparison of a large number of carefully observed cases, and it was a question of years rather than months. As a contribution of this kind, and as a model for other observers, Mr Chiene's paper was a most valuable one.

Dr Finlay expressed his admiration at the clearness with which Mr Chiene showed the value of the different symptoms. One point mentioned by previous speakers called to his mind a case he had had under his care. He was asked to see a man who had received an injury some three days previously. His parietal bone was fractured, and spiculæ had been driven into the brain. He went to work the day following the injury, but felt drowsy and came home. On the third day he was in a state of high fever, and there was paralysis of sensibility and of motion on the side of the body opposite to that on which the injury had been received. He then trephined him, and pus escaped from the dura mater. He became conscious for a few hours, then comatose, and had convulsions on the opposite side of the body. The temperature was high to begin with, and continued so till death. No post-mortem was allowed. In this instance there were none of the symptoms characteristic of interference with, or irritation of, Ferrier's motor areas.

Dr Andrew Balfour would like to bear testimony to the extreme value of Mr Chiene's paper as inducing them to pay more attention than they had hitherto done to head injuries and symptoms. In mining districts they often had such injuries to treat. Some seven or eight years ago he had one very interesting case under his care. A young miner had been struck on the back of his head by a large piece of coal. All the soft parts sloughed, and the occipital bone was severely smashed. A considerable quantity of it was removed, and the brain was seen pulsating below. The patient lived some miles away, and he had not much opportunity of paying close attention to him. He recovered, but during the first fortnight of his illness developed strong maniacal symptoms, and also a great hatred for some for whom he had an opposite feeling previously. He was engaged to be married, but now the girl of his affection was regarded with extreme abhorrence. He was seen a few weeks ago, and the doctor found new bone developed in the occiput. He informed him (Dr Balfour) that he had not yet recovered his former affections.

Dr Graham Brown thought that in his last few remarks Mr Chiene touched upon what he considered was the most important point of all. The bullet had not touched the area 12 at all, but had, so to speak, cut under it or passed through the fibres coming from it, and yet the same effects were observed as though the area itself had been irritated. This he thought was very important in helping to come to a conclusion between the theories of Ferrier and Goltz. It might be remembered that at the International Congress Goltz showed a dog he had brought with him from Strassburg, in which the cortex areas were removed without apparently much affecting the animal. The question was whether the involuntary movements were due to action on the cortex or to involvement of the deeper structures, and these cases, he thought, helped towards the solution of it.

VI. Dr Duncan read his paper entitled AN ACCIDENTAL EXPERIMENT WITH ANTISEPTICS, which appears at page 904 of this Journal.

The President remarked that after the two papers they had heard that night there could be no doubt as to the scientific attainments and enthusiasm of our Edinburgh surgeons. As the hour was late, they would postpone the discussion.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING IV.

Wednesday, 11*th January* 1882.—Prof. A. R. SIMPSON, *President, in the Chair.*

I. *Dr Cappie* showed the CORDS from a case of twins, which were interlaced so as to form a knot. One of the cords had ceased to pulsate when the child was born, and no hæmorrhage occurred from it on its being divided. The children were born at the seventh month. One died on the following day; the other is still living.

II. *Dr Waugh* showed a SINGLE CORD with a knot upon it. The cord was 32 inches long, and was wound two and a half times round the child.

III. *Dr Croom* showed an ACARDIAC FŒTUS; also a set of Emmet's INSTRUMENTS FOR TRACHELORRHAPHY.

IV. *The President* showed a THIRD-MONTH FŒTUS, with a cyst on the back of the neck, and dwarfed lower extremities; also an EXOMPHALOUS FŒTUS—to be made the subject of a communication.

V. *The President* read a paper on A CASE OF BASILYSIS, which appeared at page 781 of this Journal.

Dr Peter Young said that as the basilyst was a new instrument he could not say much as to its practical working. As to its construction, it was well adapted to effect its purpose of breaking up the base. As it was applied inside the head of the child, there was no risk of injuring maternal structures. It was constructed on a scientific principle. The measurements of the base of the cranium were a fixed quantity and could not be altered, like those of the vault, except by such an instrument. Cases of Cæsarean section would become rarer through basilysis, and the maternal mortality correspondingly diminished. He believed that the basilyst would save a great number of maternal lives.

Dr Croom thought the basilyst was a great addition to the obstetrician's armamentarium. He had had occasion to make a trial with the instrument, and would give his experience. The woman was a dwarf, and had been delivered previously by craniotomy. There was a large primary syphilitic sore on the right labium majus, and therefore he did not give the woman the chance of a premature labour. The conjugata vera measured less than 2½ inches. He resolved to do basilysis, but the instrument which he got was inefficient. It was difficult to steady the head, which was mobile and above the brim, as the pelvis was rickety. With regard to the scope of the instrument, it would be useful when the head was engaged or in the cavity but not when it was free above the brim.

The President thanked Dr Croom for his experiences in this case. The failure was due to the bad instrument, which had not the point made so as to bite. This was a defect in the first pattern of the instrument, which was the one employed by Dr Croom. He agreed with him as to its being an easier operation when the head was fixed at the brim, but his own case showed that it could also be used with a mobile head above the brim. No obliquity of the head should make the operation difficult, except an extreme degree of the Naegele obliquity. There was no risk of injuring maternal structures. The risk was rather that the operator would not screw the instrument far enough into the base; the projecting shoulder made it impossible to screw it too far.

VI. *Dr Peter Young* read a paper on VAGINAL ENTEROCELE, which appears at page 882 of this Journal.

The President said that the Fellows were indebted to Dr Young for bringing this rare condition under their notice. The bibliography given in the paper added to its value, and showed the varying conditions under which the accident might occur.

Dr Hart referred to Maugh's paper on this subject. The loose connexion of the anterior rectal and posterior vaginal wall allowed the occurrence of enterocele. An enterocele through the anterior vaginal wall would be higher up than one through the posterior.

Dr Croom drew attention to the varying depth of the pouch of Douglas in different cases.

VII. *Dr R. Milne Murray* read a paper on A DIFFICULT FACE CASE, COMPLICATED WITH SHOULDER DYSTOCIA FROM AN UNUSUAL POSITION OF THE ARMS, which appears at page 890 of this Journal.

The discussion was held over to next meeting.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Physiological and Therapeutical Action of the Lily of the Valley (*Convallaria majalis*).—This very interesting work reveals to us in this common plant a veritable substitute for digitalis. The plant was formerly much employed, especially in Germany, and Matthiole has enumerated at length its properties, which at his time were attributed to the flowers of the plant. If we are to credit his statements, there are few diseases which are not happily modified by its use. Among their number he mentions palpitation of the heart, for which it is claimed that it can be relieved by the *Convallaria majalis.* This remedy, however, had entirely fallen into oblivion when the authors of this pamphlet endeavoured to bring it forward anew, basing their claims on the results furnished by experimental physiology. Injected into the lymphatic sac of a frog, the aqueous infusion of convallaria soon produces a decrease in the frequency, with augmentation of the energy, of the heart's contractions, irregularity of ventricular diastole through the irregular relaxation of the muscles, tetanic contraction of the ventricles. These modifications in the movements of the heart are influenced neither by mechanical, electrical, nor chemical excitation of the muscular fibres, nor by those indirect ones of the central or peripheric nervous system. The dose used should be very small, in order to allow the excitation of the par vagum to produce its usual effect. Injected into the veins of warm-blooded animals the infusion of the lily of the valley produces a diminution of the number of the heart's contractions, with elevation of arterial pressure. A little later the contractions become more frequent, and the pressure is further elevated, then the contractions cease and the pressure falls. In such cases, also, the section and excitation of the peripheric end of the pneumogastric produce no change. Besides these results obtained on animals, Boioiavlenski treated with the lily of the valley six patients suffering from valvular non-compensated lesions. He administered an infusion of 3·06 grammes to 7·02 grammes of the plant in 120 grammes of water. Under its influence the quantity of urine increased *pari passu* with the disappearance of the œdema. The heart contractions become more clear, more regular, and slower; the stases in the small and large circulation began soon to disappear. The diuresis kept on even after stopping the use of the remedy. Nephritis in one of the patients suffered no change, the improvement in the general symptoms being merely less marked. Troitzki has noticed the happy effects of this remedy, especially in such cases where the asystole is caused by a nervous state which stops or hinders the compensation. He has used a less concentrated infusion of from 3·06 grammes to 7·02 grammes in 180 grammes of water, and has given of this infusion three or four spoonfuls per day in nervous palpitation of the heart. The effects obtained have always been very marked and singular; they have persisted for nine days after suspension of the administration of the remedy. The general excitation, the dyspnœa, and the intensity of the palpitations disappeared completely. According to the same author, the convallaria did not, like the digitalis, give as favourable results in aortic as in mitral insufficiency, but it is much superior to digitalis in nervous palpitation. Such is the resurrection of an old remedy which had only been employed in sternutatory powders. (By Troitzki and Bogoyavlenski; *Vratch*, 1880; 47-49, *Allgem. Centralzeitung; Lyon Medicale*).—*Therapeutic Gazette*, October 1881.

Idiopathic Alopecia cured by Injections of Pilocarpine.—It has been published in Germany, Italy and Belgium that in a certain number of cases of alopecia the hair has been made to grow by pilocarpine. A case has occurred under my observation, in which the hair and eyelashes had disappeared, and also the hair on the pubis and in the armpits had fallen off. After vainly trying many drugs, I used injections of pilocarpine—1 centigramme of the chlorohydrate in a syringeful of a solution, 20 centigrammes of pilocarpine in 20 grams of distilled water. At the end of several days the dose was doubled. The secretion of sweat was so abundant that her shoes were inundated even in going to the garden. The injections commenced the end of March. The 18th of April the hair had come out in profusion. After ten injections the head was covered with hair ⅔ of an inch long, blonde and soft; the eyelashes had commenced, but the eyebrows had not. (By D'Audre de Fleurus.)—*The Therapeutic Gazette*, November 1881.

Jaborandi and Pilocarpine.—Dr Dupret arrives at the following conclusions:—1. That jaborandi and its active principle, pilocarpine, equally possess a powerful hypercrinical action. They exercise a direct action on the salivary, sudorific, and mucous glands. As a sialogogue they equal the action of mercury, and they possess, moreover, the great advantage of being transitory in their action and inoffensive in their results. 2. The secretory action is shown at the same time. The saliva, urine, and sweat flow in abundance. No remedies can compare with them. 3. They are useful in all maladies in which functional disturbances of the skin, mucous and serous membranes, and glands, are involved. 4. These means which I call heroic can favour the course of certain slow eruptions, as smallpox. 5. At best, they are powerless or dangerous in the commencement of aguish maladies, but are curable remedies in the decline of these diseases.—*The Therapeutic Gazette*, November 1881.

Cinnamic Acid as an Antiseptic.—In scientific comparative experiments respecting the virtues of antiseptic remedies, it has frequently been shown that cinnamic acid has antiseptic and antifermentative effects. Professor Dr Fleck, for instance, gives to cinnamic acid a higher place as an antifermentative remedy than to salicylic acid. Furthermore, Schwarz has shown, by an experiment respecting the antiseptic effects of a series of chemicals upon infusion of tobacco containing bacteria (see *Pharmaceutische Zeitschrift für Russland*, 1880, Nos. 20–22, and *Industrie Blätter*, 188, page 140), that cinnamic acid is among the most effective of substances. The physiological and chemical properties of cinnamic acid as an antiseptic are of very great value in surgery. Cinnamic acid is free from taste and odour, and is not poisonous. Unlike carbolic acid, it is not absorbed. Its solubility in water is very little (about $\frac{1}{10}$ per cent.) ; but this is an advantage rather than not, for it is not so freely dissolved nor washed. The solubility of cinnamic acid in other substances is as follows:—1 part of cinnamic acid in 66 parts of olive oil. A solution in 50 parts of olive oil is at first clear, then after some time cinnamic acid separates. It is soluble in 40 parts of vaseline, in 66 parts of spermaceti, in 50 parts of a two per cent. solution of borax, and in 400 parts of glycerine. In alcohol cinnamic acid dissolves very freely, and this solution is the most convenient for soaking lint, jute, etc., for the Lister bandage. The pulverulent residue of cinnamic acid, separated after the evaporation of the alcohol, has no irritating action upon the skin. Practical experiments on the properties of cinnamic acid made by Dr Lemcke in Berlin, assistant of Professor Dr Langenbeck of the Royal Hospital, have been provisionally reported, and are being continued. The results of these experiments, as far as they have gone, show that cinnamic acid does not possess these drawbacks which are so undesirable in some other known remedies, while it does not lack any of those valuable properties which distinguish such valued antiseptics as carbolic and salicylic acids. For washing wounds, a solution of the freely soluble cinnamate of sodium has been applied. Whether or not cinnamic acid in the form of cinnamate of sodium also possesses antipyretic properties is now being investigated. Messrs A. & M. Zimmermann, of Mincing Lane, exhibited a large specimen of cinnamic acid at the Medical and Sanitary Exhibition at South Kensington. (*The Chemist's Journal*, 19th August.)—*New Remedies*, November 1881.

MATÉ.—Everybody knows of maté as the Paraguay tea so much used in South America. MM. D'Arsonval and Couty have made experiments in diminishing the gases of the blood in the following manner:—These experiments seem to prove that maté in large doses, or repeated often, has considerable action on the gaseous elements of the blood. It acts alike on arterial and venous blood. It lessens the carbonic acid and the oxygen in enormous proportions, corresponding to $\frac{1}{3}$ or $\frac{1}{2}$ their normal quantities.—*Therapeutic Gazette,* November 1881.

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street ; Assistant-Surgeon, Eye Infirmary ; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

REMOVAL OF FOREIGN BODIES BY DISPLACEMENT FORWARD OF THE AURICLE AND CARTILAGINOUS MEATUS, by J. Orne Green, M.D., Boston, President, American Otological Society.—H. L. B., aged 40 years, on May 11th, 1881, with suicidal intent, placed the muzzle of a small revolver directly in the right auditory meatus, and fired two shots into that passage. The immediate effect was absolutely negative; and on May 14th he was brought to the city hospital, complaining only of dull, diffuse headache over the right side, with soreness of the ear and right side of the face. Examination showed the whole right side of the face considerably swollen, and there was inability to draw up the right angle of the mouth, close the right eye, or move the right ala of the nose. There was no discoloration about the ear, and the visible skin of the meatus was unbroken. The pulse, temperature, and respiration were normal, and there was no dizziness. The appetite was good, and there was no apparent affection of the intellect or speech. The movements of the jaw were perfect. Examination with the speculum and reflected light showed the deeper meatus completely filled with black masses of half-burnt powder, and with a probe loose foreign bodies could be felt deep in. On attempting removal of the black masses, they were found to be mixed with shreds of fibrous tissue, still adherent. There was a moderate amount of discoloured serum discharging from the ear.

May 17th.—Under ether a semicircular incision was made above and behind the auricle, through the periosteum, and the periosteum, with the auricle and cartilaginous meatus, carried forward till the edge of the osseous meatus was reached; the insertion of the cartilaginous to the osseous passage was then cut through in its upper and posterior part. The little finger inserted immediately felt a loose foreign body, which was readily seized with forceps, and, being withdrawn, proved to be an irregular bit of lead. After syringing and digging out masses of powder, another loose foreign body was felt, and proved to be the anterior osseous wall of the meatus, nearly rectangular in shape, and about six millimetres broad by ten millimetres long. No more loose bodies could be felt, but with a porcelain-tipped probe lead-marks were obtained deep in, and, with considerable difficulty, a second mass of lead, which was firmly impacted, was loosened and withdrawn. The meatus was now so clear that inspection was possible, and it was seen that the whole deepest meatus was filled with a dark mass, firmly fixed, but of what character was uncertain till the porcelain probe was used and lead-marks again obtained. This was seized with strong forceps, gradually loosened, and removed, making a third mass of lead. All of the tissues within the meatus were black, and none of the landmarks could be discovered, but inspection and Nelaton's probe failed to find any further foreign body. The auricle was replaced, the incision united by sutures, and a carbolic dressing applied. The same dressing was continued, and the meatus was syringed three times a day with a carbolic solution.

May 19th.—The patient was doing well. Pulse and temperature normal, and appetite good. Moderate sero-purulent discharge from meatus. The headache he reported as much better.

May 20th.—Doing well.

May 21st.—Thick, purulent discharge from ear. No other change, except that he insists on sitting up, and is reported by the nurse to "act queerly."

P.M.—Refuses food, and is very sullen, not answering questions.

May 22nd.—Refuses food and medicine. Requires to be held while wound is dressed. Thinks he is at sea, and that the floor is sinking. Pulse, 120; temperature, 101°·5; brandy, beef, and milk.

P.M.—Violently delirious; pulse 140 and weak; respiration shallow, and died at 1.40 A.M. on May 23rd.

Autopsy by Dr E. G. Cutler, pathologist to the hospital, on May 24th, thirty-eight hours after death. The wound in the temporal region presented a greenish, discoloured appearance. There was nothing remarkable in the soft parts of the head away from the wound. The dura mater showed a slight greenish discoloration over the petrous bone, found to be due to serum beneath the pia. Pia slightly injected. Over the convexities near the longitudinal sinus were a number of old thickenings of the pia, usually of small area, and none larger than the head of a pencil. Over the petrous bone, for an extent of half an inch in diameter, just above the roof of the tympanum, the dura, pia, and brain substance were firmly adherent and could not be separated from the bone. Just above this, entering the brain and passing upward for half an inch, was a small sinus, evidently the track of a piece of one bullet. Small fragments of bone were imbedded in the dura at this point. The pia was much injected in the vicinity of this wound, and blood had settled in the pia and gravitated downward into the posterior fossa of the skull. The wound and adjacent tissues contained much pus, as did also the glenoid cavity. The brain-substance was injected and showed a small amount of senile atrophy. Pachymeningitis existed over the right convexity. Other organs were not examined. The right temporal bone was removed and examined by me. The whole anterior wall of the osseous meatus down to the tympanic ring was lacking. The tissues in front of the ear, around the glenoid fossa, were gangrenous. The roof of the tympanum was perforated by an opening eight millimetres long and four millimetres broad, this opening being covered by the inflamed and adherent dura, and corresponding with the bullet-track in the brain. The bone within the tympanum was entirely denuded; no trace of any of the ossicles could be found, and the lower edge of the fenestra ovalis was broken away, making a large opening into the vestibule, and the promontory around this opening was black. No trace of any lead was found within the bone. Unfortunately the bit of brain containing the bullet-track was lost, but there was no doubt that the brain was perforated by a bit of the bullet which passed through the tympanic roof. The pieces of lead removed by operation weighed respectively 6¾, 19¾, and 21¾ grains, in all 48¼ grains, while two bullets of the size used would weigh 60 grains, leaving 11¾ grains, which in all probability entered the brain.

Remarks.—On first examining the case I found that the entrance of the meatus was unusually small. The largest Gruber's speculum which could be inserted measured only five millimetres in its longest diameter; and this fact, with the certainty that the bullets, if found, would be very much flattened, convinced me that removal through the natural meatus would be impossible, even if I was able to get hold of the foreign bodies. I therefore decided to avoid the natural obstructions by entering the meatus behind them, thus getting nearer the seat of operation, and making certain of an opening for extraction at least as large as the osseous meatus, which the external cartilaginous orifice was not. The result proved the correctness of the theory, for only the first and smallest bit of lead could by any possibility have passed through the external orifice, the measurements of the pieces, which were all of irregular shape, being as follows:—No. 1, 5 × 11 × 2 mm.; No. 2, 10 × 13 × 2 mm.; No. 3, 6 × 11 × 5 mm.; while the bone removed measured 10 × 5 × 7 mm.

I was extremely gratified by the freedom afforded for the use of instruments after displacement of the cartilaginous meatus. There was none of the loss in width of grip in forceps, as must always occur when they are passed deeply into a small passage, and in this particular case the loss of the anterior wall of the meatus made it possible to insert the end of the little finger even into the tympanum, thus giving a most valuable guide during the operation.

The chief point of interest was the method of operating, which still seems to me the best that could have been adopted in this case; and if it had not been for the glancing upward of a portion of one bullet through the roof of the tympanum into the brain, a condition which it was impossible to diagnosticate beforehand, either from the symptoms or from any examination, there seemed no reason why recovery should not have occurred with the loss of the hearing in that ear, as the only other injury, aside from that of the soft tissues of the tympanum, was the free opening into the vestibule.

The operation of displacement of the auricle forward for removal of foreign bodies is by no means new in theory. The whole subject is thoroughly discussed by Von Tröltsch in the seventh edition of his *Lehrbuch* (1881). The suggestion of the operation is found in Paulus Ægineta (660), and in recent times has been recommended by Hyrtl. Von Tröltsch approves of it where operative interference is implicative and other methods of removal are impossible, but suggests that in children the auricle and cartilaginous meatus be separated from the osseous meatus by a simple incision above the meatus along the squamous bone, and in adults that the osseous meatus be reached by an incision along the lower wall of the cartilaginous canal. Neither of these methods seem to me adapted for giving a thoroughly free and large opening for extraction of expanded bodies like those in this case, and both seem open to the objection of insufficient drainage after the operation, if such becomes necessary, while the latter method must almost certainly wound the parotid gland and add another element of risk. Von

Tröltsch narrates four cases where displacement of the auricle forward was performed—one by Langenbeck and three by Schwartze. All were successful and recovered: one healed *per primam intentionem*, and the others by granulation.

In the removal of foreign bodies from the ear by other instruments than the syringe—and a certain number imperatively demand such instrumental interference—I have always felt that there were but two universally applicable rules: to see what one was doing, and to be familiar with the minute anatomy. Any one of the great number of methods and instruments which have been used by different operators with success may at some time be adapted to an unusual case; and I am the more surprised to see that so distinguished a surgeon as Professor Gross writes:—"The idea of separating the auditory canal from the squamous process of the temporal bone, with a view of obtaining access to the extraneous substance, as suggested by Von Tröltsch, is so absurd that it ought to be ranked among the exploded notions of the barbarous ages." So sure as the author lives will he some time be obliged to adopt the operation which he so unreasonably condemns, or let his patient die. The "utter futility" of the operation for getting at the foreign body, to quote from a recent writer in the *American Journal of Otology*, January 1881, is well demonstrated, not only by the success in the case I have given, but in the four quoted from Von Tröltsch.

In examining ears I have often remarked that in some persons the external portion of the cartilaginous canal was the smallest part of the whole passage, and that just within this construction the passage enlarged very much, especially in its posterior and upper walls. In a reply to the author just above quoted, at the Boston Society for Medical Observation, where the paper was originally read about a year ago, I called attention to this not uncommon anatomical fact, and attempted to show that the suggestion of such an operation was not "absurd," but based on good anatomical grounds, and also expressed the belief that in very exceptional cases some such operation would be necessary.—*American Journal of Otology*, October 1881.

GUNSHOT WOUND OF THE EAR, WITH LOSS OF LIQUOR CEREBROSPINALIS, by R. Kœrner, *Archiv für Ohrenheilkunde*, vol. xvii. p. 195.—The bullet from a revolver, 9 mm. in calibre, entered just behind the meatus into the bone, through the right auricle, and embedded itself in the lower and posterior part of the tympanum, close to the mastoid antrum. The only symptoms were vertigo and a tendency to walk in a circle; no pain in the head, nausea, or vomiting, or paralysis. A clear, transparent, watery fluid, tinged with blood, flowed from the wound—by measurement two cubic centimetres—in fifteen minutes, and was considered to be liquor cerebro-spinalis. Three days afterward there was severe headache behind the right ear and in the occiput, much relieved by leeches. Five days after injury the discharge, which was never purulent, began to diminish, and in three days more had ceased entirely, although vertigo continued for some days longer. The hearing of the ear was lost immediately, and never improved. No attempt was made to remove the bullet. The probable diagnosis was a fracture of the osseous and a rupture of the membranous labyrinth, which, from its communication with the arachnoid cavity, produced the abundant serous fluid and gave rise to the uncertain gait from injury to the semicircular canals.

Further Contributions to the Neuropathic Form of Menière's Disease, by S. Gottstein, *Archiv für Ohrenheilkunde*, vol. xvii. p. 174.—By neuropathic forms of Menière's disease Gottstein would include those cases of aural vertigo the cause of which lies in a disease of the auditory nerve, either along its trunk or in the terminal fibres within the labyrinth, and when disease of the conducting mechanism can be distinctly excluded. He considers that the majority of cases which present the symptoms of the primary otitis labyrinthica of Voltolini are in reality secondary, and usually the results of meningitis cerebro-spinalis, the symptoms of the meningitis being often overlooked owing to the peculiar course of the disease. To uphold this position Gottstein assumes an abortive form of cerebo-spinal meningitis, which, as it is never fatal, cannot be confirmed by autopsy, but is acknowledged by Eulenberg and others who have seen much of the disease. And, again, he says that many cases of the so-called otitis labyrinthica present the clinical picture of a mild cerebro-spinal meningitis; and, the strongest point of all, that they occur during epidemics of that disease. He shows by his statistics that in places and at the time when cerebro-spinal meningitis was epidemic, so-called otitis labyrinthica was frequent, and as the epidemic diminished the cases of this aural disease diminished. It is well known that in these cases other nerves may be, and often are, affected besides the auditory, and that mild symptoms of meningitis are present. Gottstein asserts that in *all* such cases which he has examined the meningitic symptoms, although perhaps slight, have always preceded the auditory symptoms. He narrates a case in which the abducens, oculomotorius, and trigeminus, and finally the acusticus, were affected, and another where the symptoms were almost entirely those of otitis labyrinthica followed by deafness and disturbances of equilibrium, and yet idiocy was also the result. From these observations Gottstein is inclined to doubt more and more whether there is a real primary otitis labyrinthica.—*American Journal of Otology*, p. 329, vol. iii. No. 4.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

On Psoriasis. — Lang of Innsbruck, after reviewing all the alleged causes and concomitants of psoriasis, expresses the opinion that a consideration of the clinical symptoms has led him to the conclusion that it must be due to a fungus seated in the skin. Since 1876 he has actually discovered with great regularity fungous elements in the scales of psoriasis, but specially in certain strata of the eruption. When the silvery dry masses of scales are pulled off by means of forceps, a film is met with to which Bulkley has also directed attention, and which Lang has named the psoriasis-membrane; and it is in this layer that the fungus is most certainly encountered. A piece of this film must now be stripped off with a quick pull of the forceps, so as to avoid its being saturated with blood. This is to be placed on a slide, exposed so long to the action of a 5 per cent. solution of caustic potash as will render the epithelium which composes the membrane translucent,and separated and examined under a cover glass. Double-contoured, highly refracting spores can now be easily seen on and under the swollen epithelium. If, instead of caustic potash, a mixture of equal parts of glycerine and water is employed, this, though rendering the epithelium less transparent, favours a further progress in growth of the fungus, so that sooner or later—on an average, in two or three hours—the formation of new hyphæ can be seen at the free margin of the specimen, or in a part which happens to be thinner. The mycelium forms parallel lines or winds. The free ends of the hyphæ are simply rounded or club-shaped. The moniliform arrangement is rare; still more so is branching. The preparations keep for some time, but in course of days or weeks disintegrate. The fungus appears to be a hypomycet of the lowest species, one which is remarkably distinguished from any previously found in the human skin. Lang names it epidermido-phyton. Although it cannot be regarded as settled how far the epidermido-phyton is the cause of psoriasis, yet even the clinical phenomena lead to the impression that the disease is a mycosis. Lang points out the general characters which distinguish the dermato-mycoses, and how closely psoriasis conforms to these. The whiteness and silvery glance of the scales in cases of psoriasis which have not been meddled with are noticeable, and are not met with in other chronic skin diseases. Sir Erasmus Wilson has thought this was due to the sponginess of the masses of scales, and to these inclosing minute particles of air, which possess refractive qualities. Lang thinks the remains of the fungus among the scaly masses may give rise to the silvery lustre. He has found the same fungus among the scales of a patch of eczema which spread circumferentially as a crescent, and also in the dry epidermis removed from the skin over the spine of the tibia in several individuals. He draws the conclusion that the germs of the epidermido-phyton may be met with pretty often on our skins, and often exist there only transiently without causing any marked alteration of the surface, further than an increased formation of scales. He regards it as admissible that it may repeatedly germinate on individual portions of skin, till at length it is fortunate in securing a permanent hold on the Malpighian layer, and thus give rise to the patches characteristic of psoriasis. Rough and fissured portions of the integument are more favourable for the attachment of the spores than smooth ones. Such rough spots are found below the knee and over the olecranon, and also amongst the hair in the scalp. These are the primary situations in which psoriasis shows itself. From these it seems to spread, and there it lasts longest. Like other parasitic affections, all individuals are not alike prone to become affected by it. As regards infectiousness, parts which have been irritated or abraded in psoriatically disposed persons become often the seat of fresh patches. In the treatment of psoriasis Lang bases his procedure on the same principles as hold good in other dermato-mycoses. All those means, therefore, which contribute to the ready removal and thorough elimination of the fungus, such as baths, washing with soap, caoutchouc dresses, the dermal curette, etc., favour markedly the shortening of duration in treatment. Again, such remedies as are destructive to fungi,—tar, carbolic acid, chrysophanic acid, pyrogallic acid, preparations of corrosive sublimate,—when sufficiently long and suitably employed, admit of the expectation of a permanent cure of psoriasis. Spontaneous cure has been observed, as in the case of other dermato-mycoses; and, after an antiparasitic treatment, Lang has in four cases met with no recurrence after intervals of 1½, 3, 3½, and 5 years respectively. Local treatment must, as in the case of favus, be persevered in till not a trace of the disease remains. On spots which have been affected with psoriasis, though to all appearance normal, firm pressure with the nail will often suffice to raise an epithelial film, even, perhaps, silvery scales. So long as this can be done treatment is to be continued. Any lurking-places of the fungus, as behind or within the ears, the scalp, the knee, and elbow, are to be kept under observation. Scraping persistent patches on the head with the sharp spoon has finally caused their disappearance. He has found specially serviceable sublimate collodion, ¼ to ½ per cent., a mixture of glycerine and alcohol, either alone or with addition of $\frac{1}{10}$ per cent. of sublimate, and rufigallic acid. Rufigallic acid, $C_{14}H_8O_8$, is an efficient remedy in psoriasis, and, when applied to the face and head, does not affect the conjunctiva. He has used this as a salve, 1 in 10.—*Volkmann's Sammlung Klinischer Vorträge*, No. 208.

Recent Papers on Leprosy.—This disease is spreading alarmingly in the Sandwich Islands. The papers are calling loudly for more stringent enforcement of the laws for the segregation of lepers. Over 5000 persons have fallen victims to it since its presence was first discovered, between 1848 and 1852; and *the contagiousness of the disease is acknowledged by the physicians there* (*Archives of Dermatology*, Oct. 1881). In America, too, ample opportunity has been afforded for its study in consequence of the prevalence of leprosy in Louisiana. Bruns (*Archives of Medicine*, Dec. 1881) discusses it from a clinical point. He rejects the macular variety as in itself distinct, regarding it as one stage of one type of the disease. Again, while admitting that the disease exhibits slight variations in form in different localities, he thinks no hard and fast line of demarcation can be drawn between the tubercular and anæsthetic forms. Anæsthesia is present more or less in all tubercular cases, while tubercles show themselves after a time in instances primarily anæsthetic. In the atrophying muscles of both forms fibrillar contractions or twitchings are observed, or may be excited by smartly tapping the muscles with the finger. The temperature is higher and the pulse more rapid (even, in his experience, in the more purely anæsthetic form) than is normal. Albumen was not met with in the urine of fifteen cases. In the tubercular type there is a somewhat arbitrary division into three stages—the prodromal, in which various vague disturbances of general health, a bullous eruption, and occasionally epistaxis, are met with; the macular, where these vanish and claret-coloured, hyperæsthetic macules come out, becoming in time of a light coffee tint and anæsthetic; and lastly, the tubercular stage. Three forms of retrograde metamorphosis are enumerated—atrophy, softening, and subsequent ulceration. The anæsthetic type assumes invariably the chronic form, and the morbid process occurs chiefly in the sheaths of the nerve-trunks. Unknown, or nearly so, in certain latitudes, in others it seems to be the prevailing form of leprosy. In Louisiana only one case had come under his observation. It may manifest itself in two distinct modes: it either supervenes upon and complicates a tubercular case, or it exists as a distinct type from the beginning. In either case the symptoms are much the same. It may, as a matter of convenience, be divided also into three stages. First, prodromic stage, which differs little from the corresponding one of the tubercular; the bullous eruption, which resembles pemphigus vulgaris, only two or three blebs being present at one time, is usually present. This eruption may appear years before any other symptom, or it may crop out upon portions of skin which have lost their sensibility. The second, or macular stage, is rarely very clearly pronounced. The third, of anæsthesia or atrophy, is preceded by a period of hyperæsthesia or exaltation of sensibility. This may vary from a feeling of tingling or formication to that of acute pain, local or general in extent, spontaneous or excited by contact. The spots or stains, which first become hyperæsthetic, very slowly descend in the scale, lose first their morbidly excited, then their normal function, which thus passes finally on into complete extinction—anæsthesia. This last extends into broader and broader areas, and into deeper and yet deeper-lying structures, so that skin, cellular tissue, and muscle become at last little more than "senseless things." The whole body may eventually become involved. Ulceration, when it occurs, is usually, as in the tubercular form, painless. When the anæsthetic supervenes on the tubercular, the general impression is that life is prolonged.

Schmidt (*Archives of Medicine*, Dec. 1881) contributes a long and exhaustive paper on the pathological anatomy of leprosy. The results of his post-mortem examinations tend to support the opinion expressed by recent authors, that all cases of tuberculated leprosy would finally become anæsthetic, if the patient's life were not previously cut short by the disease before the neoplastic elements had also made their appearance in the nervous tissues. The characteristic histological element of leprosy is represented by certain small proliferating cells of a round, oval, uni- or bi-polar, or otherwise irregular form. The origin of these cells is generally referred to the cells properly belonging to the connective tissues of the affected organs, such as the skin or mucous membranes, or of the adventitia of the vessels, the sheaths of nerves, the capsules, etc., but the neoplastic cells may also be derived from the glandular, epithelial, endothelial, and even fat-cells. In the skin the disease begins in the pars reticularis of the corium, whence it may extend in one direction and invade the pars papillaris and even the mucous layer of the epidermis, or may descend into the subcutaneous tissue. The ducts of the sudoriparous glands become obliterated, while the coils are little affected. Taken in its entirety, the whole pathological process can hardly be regarded as a mere hyperplasia of the connective tissues; but its products, in Schmidt's opinion, represent rather a neoplastic growth, resembling in its general character the tubercle of tuberculosis, ultimately undergoing, like the latter, a retrogressive metamorphosis. This growth, remaining for a long time limited to the skin, does not immediately endanger the life of the patient. The fatal termination of leprosy depends, undoubtedly, mostly upon the neoplastic cells appearing in the internal organs, especially the lymphatic glands and liver; the affection of the former depraving the blood, and in consequence interfering seriously with the nutrition of the organism, while the organic disease of the latter gives rise to the pathological phenomena observed in the alimentary canal almost always present in the later stages of the disease, and taking a share in the general exhaustion of the patient. Neither of these authors refer to the bacillus lepræ. Bermann of Baltimore is the first in America who has detected the bacillus in leprous tissue. Weigert's methods for investigating bacteria answer perfectly. The affinity of the bacillus lepræ for the aniline violet staining fluid is remarkable. The *Philadelphia Medical News*, 7th Jan. 1882, thus describes the method:—By immersing the stained sections in oil of cloves for forty-eight hours the violet colour is removed almost completely from the tissues, leaving the bacilli stained dark purple and presenting sharp outlines. It remains very difficult to see them, however, even after this preparation, and objectives of high power (with small angle) must be employed. By using as a condenser an objective of about ¼ inch for illumination they come out with splendid definition. The bacilli are mostly to be found in the protoplasm of the cells, but may be seen elsewhere. Sections thus prepared and examined will satisfy the most incredulous.

BORACIC ACID AS AN ANTISEPTIC IN CERTAIN SKIN AFFECTIONS.—Thin adds fresh testimony to the value of boracic acid in the treatment of fœtid perspiration of the feet. By wearing stockings and cork soles saturated with boracic acid the smell is at once annihilated. Besides this, the tendency to profuse perspiration becomes gradually diminished, and in time completely disappears. He thinks this arises from some change in the horny layer of the epidermis. In one of his cases the epidermis of the soles of the feet became harder than usual, and at some parts developed into a thick horny crust. He also recommends a new mode of preparing an ointment of boracic acid. The thin, sharp-edged, crystalline plates in which boracic acid is met with cannot be reduced to an impalpable powder so as to form a perfectly smooth ointment. By dissolving the boracic acid in glycerine, Messrs Savory & Moore have overcome this; and then, by combining the solution with a suitable quantity of white wax and olive oil, a cream is obtained which possesses valuable properties as an ointment.—*Practitioner*, Dec. 1881.

CUTANEOUS PRURITUS.—Purdon believes that general itching of the cutaneous surface, when unassociated with any affection of the skin, is due, as a rule, to deranged action of the liver connected with the abuse or excessive use of alcoholic liquors, or from jaundice. As a hepatic stimulant in such cases he recommends "rag-weed," an excellent preparation of which is made by Grattan & Co., Belfast, and called by them *Succus Senecionis Jacobææ.* The dose is from one teaspoonful to a couple of tablespoonfuls, either with or without a teaspoonful of sulphur, early in the morning. Locally, the Turkish bath and sponging the body with vinegar and borax is useful, and relieves the attack for several hours.—*Practitioner*, Jan. 1882.

AN EPIDEMIC OF TRICHOPHYTON.—Bergeron remarks on an epidemic of trichophyton observed by Dr Gertier in Ferney-Voltaire, in which the identity of parasitic sycosis with herpes circinatus and tinea tonsurans was proved. The attendant in a school was, in the first instance, found to be affected with herpes circinatus; and he suspected that it had been communicated by comb and razor, as observed by Bargin. In fact, the man had been shaved by the sole barber in the place, and soon other customers of his were discovered affected with the same disease or with parasitic sycosis. Further inquiries elicited that a child of the barber's attended a school in the neighbourhood in which twenty-one children had herpes circinatus. The disease appeared to have been introduced into the school by a boy whose father occupied himself in clipping horses, and had cut his child's hair with the same scissors which he used for that purpose.—*Viertelj. für Dermatologie und Syphilis,* 2 und 3 Heft, 1881.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

The Galvanic Cautery in Ocular Surgery.—Wecker and Masselon have introduced a small galvanic cautery, which they find more manageable and capable of more extended application than the form of actual cautery which has been used for some time past by Gayet, Martin, and others. It has been found to be of use in cases of indolent ulcers of the cornea, also in cases of rapidly spreading ulcers uncomplicated with hypopyon. In the hypopyon ulcer the operation of Sæmisch is indicated. The subconjunctival destruction of vessels proceeding to the cornea in obstinate cases of pannus by means of the cautery is also recommended. This proceeding is followed by very little pain or inflammatory reaction. Galvanic puncture through the sclerotic, in cases of detached retina, has given different results, but has, on the whole, proved more efficient than the ordinary puncture of the sclerotic, probably owing to the entire absence of hæmorrhage and the greater completeness of the drainage. Finally, they have adopted the same treatment in glaucoma absolutum and buphthalmos.—*Annales d'Oculistique*, Jan. and Feb. 1882.

Stretching of Infra-orbital Nerve.—Coppez succeeded in curing a neuralgia of twenty years' duration by stretching the infra-orbital nerve. The neuralgia had been periodic for fifteen years, but for the last five had been almost continuous, and entirely interfered with work. The supra-orbital was also affected, apparently as severely as the infra-orbital, and it was intended to stretch it as well if the first stretching had not succeeded. Immediately after the operation the zone comprised between the nose and the middle of the cheek, the half of the upper lip, and the mucous membrane covering it, were completely anæsthetic. The sensibility began to return three days afterwards, and was complete after five days. A little more than two months had elapsed since the operation, without the return of the slightest pain.—*Annales d'Oculistique*, vol. lxxxvii., Feb. 1882.

Nitrite of Amyl in Amblyopia.—Deutschmann describes three cases in which he considers the inhalation of nitrite of amyl has been of use:—(1.) A man aged 71, eight days previous to presenting himself at the Göttingen clinic, had suddenly experienced a great diminution in the sight of his right eye. During the preceding week the sight had been affected, but only transiently returning apparently to its normal acuity every evening. Ophthalmoscopically: papilla pale; the arteries of the retina somewhat narrowed in calibre; no increase of the condition on pressure; veins normal. V R fingers at 10′; field much restricted, with + 6 D J 12; V L $\frac{20}{70}$, with + 4, 50 J 1; field free. Immediately after an inhalation of nitrite of amyl during half a minute, R fingers at 17′, L $\frac{20}{50}$. The next day there was a spontaneous improvement

(R $\frac{20}{100}$). The patient was then left till the following day without any treatment, when the vision was found to have remained the same, but rose immediately after another inhalation to $\frac{20}{70}$, in which condition it remained. There was no evident ophthalmoscopic change. (2.) A man aged 62, left eye amaurotic; right, fingers at 1′. Ophthalmoscopically, white discs with greatly diminished vessels. After inhalation of the nitrate twice a day during a fortnight, fingers at 20′, at which remained stationary. (3.) A man (age?), with amaurosis right and $\frac{20}{200}$ left, excessively white discs and contracted vessels. Improvement after three weeks to $\frac{20}{50}$; no ophthalmoscopic change.

KÜMMELL ON STRETCHING OF THE OPTIC NERVE (*Deutsche Med. Wochensch.*, 1882, No. 1).—The first attempts at stretching the optic nerve were made by Wecker; in one case without success, in others the result has not been stated. Kümmell, by experimenting on animals and on the cadaver, satisfied himself of the harmlessness of the operation, which consisted in passing a blunt spatula-shaped instrument through an opening in the conjunctiva at the inner border of the cornea to the point of insertion of the optic nerve, after tenotomizing the internus. Kümmell prefers passing a blunt strabismus hook in between the inferior and externus. In seven cases in which he performed the operation there were no serious consequences. Observations on the dead subject showed that tractions on the nerve produced an action spreading as far as to the entrance of the optic tract into the cerebral substance. In a patient who had been under treatment for a long time with iodide of potassium and strychnia, the stretching of the optic nerve produced an improvement. The other cases were unsuccessful, although the operation was not followed by any bad results. He recommends a trial of this operation in slowly progressing atrophies in which some qualitative light sensation still remains.

QUININE AMBLYOPIA.—Three papers in the last number of the *Archiv für Augenheilkunde,* vol. xi. 2, are devoted to the subject of quinine blindness. The description given by the different observers, Grüning, Michel, and Knapp, agree as to the main points in connexion with the curious visual disturbance which is produced by large doses of quinine. The principal symptoms are,—total blindness, it may be, or marked amblyopia, with restricted visual fields, paleness of the discs, and marked diminution in the size and number of the retinal vessels. There is produced at the same time a greater or less degree of deafness and tinnitus. The deafness is, however, transitory, rarely lasting more than twenty-four hours without improving. In the less severe cases the blindness may also entirely disappear; but in the severe and typical cases the nerve remains pale and the vessels diminished in calibre, and a considerable degree of restriction of the field of vision permanently remains, although the central vision may attain its normal acuity, or at any rate improve, up to $\frac{20}{30} - \frac{20}{100}$. No case of permanent blindness has as yet been recorded, so that the prognosis is good.

ON THE SPECIFIC REACTION OF THE OPTIC NERVE TO MECHANICAL IRRITATION.—A number of cases are on record in which, although there was no reason to doubt the presence of functional activity in the optic nerve, its section has not been followed by any sensation of light, as it is generally supposed to do. Schmidt Rimpler (*Centralblatt für die Med. Wissensch.*, 1882, No. 1) was led on this account to try if he could get a specific reaction by pressing over the stump of the optic nerve in cases where the eye had recently been enucleated. In six cases he produced in this way light flashes in two, by electrical stimulation in all, so that he concludes that a specific reaction does follow mechanical irritation if properly tested.

MASSAGE IN DISEASES OF THE EYE.—Pagenstecker recommends massage (*Arch. f. Ophth.*, 1881), in cases of old-standing opacities of the cornea and pannus, to promote absorption, also in episcleritis or scleritis, and all chronic affections of the anterior part of the eye when uncomplicated with iritis. The massage is effected by rapidly and lightly rubbing the surface of the eye over the inflamed part through the lid.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. MILNE CHAPMAN, M.B., M.R.C.S.

A PLEA FOR EARLY OVARIOTOMY, by Granville Bantock, Surgeon to the Samaritan Free Hospital for Women and Children; London, H. K. Lewis, 1881.—After quoting from Spencer Wells, Peaslee, and West and Duncan, to the effect that ovariotomy should not be performed until it is, so to speak, necessary, and after stating the contraindications to the operation given by the latter writers, he says that there is scarcely one of them that he and others have not successfully violated over and over again. The following propositions are then laid down:—(1) We should not wait till the patient's general health has become impaired; (2) The presence of the tumour is the cause of structural disease in other organs; (3) Ovarian tumours are liable to a variety of accidents, such as rupture, etc. etc.; (4) The existence of adhesions or the occurrence of such accidents greatly interferes with the success of the operation; (5) On the contrary, the earlier and simpler the operation, the greater is the chance of recovery. These five propositions are then considered in detail, and the writer states that he is quite prepared to endorse Koeberlé's statement that "90 per cent. of the cases without adhesions ought to recover," and that he believes that we may confidently look for a still more favourable result than that. A table is given showing that the rate of mortality is in inverse proportion to the duration of the operation, and the writer concludes by urging that ovariotomy should be performed as soon as we can make sure of the diagnosis, and expressing his belief that, were this rule followed in only a majority of the cases, the success would be much greater than we are even now able to boast of.

ON ANTISEPTIC MIDWIFERY AND SEPTICÆMIA IN MIDWIFERY, by Robert Barnes, M.D., London (*American Journ. of Obstet.*, Jan. 1882).—The writer considers at length the physiological peculiarities of a woman during the latter part of pregnancy and during the lying-in period, and discusses the various meanings which have been attached to the word septicæmia. In regard to the puerperal condition, he would differentiate three kinds of blood-poisoning, which he describes as follows:—"1. The self-empoisonment resulting from the loss of balance between absorption of waste stuff and its secretion. This may be called *endosepsis*, since the poison arises within the system. 2. Self-empoisonment from absorption of the foul stuff of decomposition in the uterus. This may be called *autosepsis*, since the puerpera takes poison of her own making. This is what has been more especially called septicæmia. 3. Empoisonment from foreign sources. This may be called *exosepsis*. There may be a simple endosepsis, but autosepsis also implies endosepsis; and exosepsis is a compound of all three." Endosepsis is not communicable or infectious. Autosepsis is, while exosepsis is doubly infectious, both as autosepsis and as a zymotic. Antiseptic midwifery the writer summarizes in the following rules:—"1. Keep the door shut against the enemy by maintaining contraction of the uterus. 2. Prevent the enemy from forming and collecting by irrigating the parturient canal with antiseptic fluids. 3. Eject the enemy as fast as he effects an entry; that is, keep the excretory organs in activity. 4. Guard the lying-in chamber against the approach of foreign poisons. 5. Fortify the patient against the attack of the enemy by keeping up due supplies of wholesome food." Among the measures recommended in obedience to those rules, the writer advises that contraction of the uterus be maintained, first manually, then by a pad and binder, by an aperient the day after labour, and by the use, three times a day for three weeks after delivery, of a mixture containing quinine, ergot, and digitalis; also washing out the uterus, twice daily from the second day, with carbolic acid solution 1–50, and most imperatively so "should there be the slightest rise of temperature and pulse." The strictest antiseptic cleanliness must be employed on every hand. It is suggested that a solution of sulphurous acid, 1–40, would be preferable to the carbolic lotion. The importance of good ventilation in the lying-in room is insisted on. As regards hospital practice, it is advised that every woman should be delivered under the spray. "This disinfects nurses and pupils who are assisting, and prevents the entrance of germs or foul matter into the genital tract at the moment when it is distended and opened by the passage of the child." Carbolic spray of 1 in 80 should be nearly continuously playing in each ward.

EXPERIMENTS ON THE EFFECTS OF LIQUOR FERRI PERCHLORIDI, TINCTURE OF IODINE, AND STRONG SOLUTION OF NITRATE OF SILVER, WHEN INJECTED INTO THE PERITONEAL CAVITY, by E. Schwartz, Halle (*Centbl. f. Gynäk*, 1882, No. 6). — Granting that intra-uterine injections of the above substances may find their way into the abdomen, the writer denies, on theoretical grounds, that they could do any harm, and then gives the results of seven experiments on dogs, with the following conclusions:—None of the above substances, when used in the quantity of 1 ccm., were capable of producing a dangerous or a suppurative peritonitis. On the whole, no bad effects were noticed. Two of the dogs were killed and examined six months after the experiments, and not a trace of inflammation or adhesion was to be found in the peritoneum. After these results, says the author, no one need be afraid to use perchloride of iron to stay hæmorrhage from the peritoneum after removal of adherent fibroids or such like.

IODOFORM DURING THE PUERPERAL STATE, by Dr J. Mann (*Ibid.*, No. 7).—The writer recommends that all wounds of the genital canal caused during delivery should be washed with carbolic lotion, dried, sprinkled with iodoform (deodorized), and covered with iodoform wadding. This forms an efficient and antiseptic barrier to the absorption of putrid fluids, and permits of the wounds granulating before it is itself washed away.

CASTRATION FOR UTERINE FIBROIDS, by W. Wiedow, Freiburg (*Ibid.*, No. 6).—The writer gives brief accounts of 21 cases of the above operation performed by Hegar, with the following results:—Deaths, 3. Complications—Intraperitoneal abscess in 2 cases, slight peritonitis in 2 cases, perivaginal abscess in 1, thrombosis in 1. As regards hæmorrhage—immediate cessation in 11, cessation after one to three menstruations in 4; in 1 case there was cessation for three months, and then return, with at the same time a spontaneous effort at enucleation and a second operation to complete it, and in 1 case there was, after five months' freedom from bleeding, a return of it, attended by an increased growth and lymphangiectatic degeneration of the tumour. As to the ultimate results, there were 15 cases of complete cure of the bleeding, with diminution in size of the tumour; 1 case where, after nine returns of the menses, cure followed; 1 case where there was a cure, but where spontaneous enucleation ultimately occurred; and 1 case where there was a temporary improvement, with cessation of bleeding and diminution of size of the tumour, followed by its increase and lymphangiectatic degeneration, and where death occurred nine months after the operation. The 3 deaths resulting directly from the operation were caused—1 by septicæmia, the operation having conveyed the disease; 1 by peritonitis on the 5th day (a very difficult operation); and 1 on the 4th day, of septic peritonitis.

A MODIFICATION IN THE OPERATION OF REMOVAL OF THE

UTERUS BY THE VAGINA, by Müller, Berne (*Ibid.*, No. 8).—The writer draws attention to the difficulty and unsatisfactoriness with which the first ligatured broad ligament can be secured compared with the ease in securing the second when the uterus, being freed on the one side, can be drawn down freely, and he recommends that, to obviate the difficulty in the first case, the uterus should be divided down the centre, and each half drawn down and its corresponding ligament ligatured. Although he has not yet had an opportunity of testing this method, he expresses his belief that there need be no fear of hæmorrhage from the portion which is for a short time left in the abdominal cavity, as it would be slight, and might be easily checked temporarily.

THE LABOURS OF ELDERLY PRIMIPARÆ, Mangiagalli (*Annali di Ostetr.*, 1881, Nos. 5–8; *Ibid.*, No. 8).—The writer reports 60 cases, the ages all being over 35; 9 died, and in 32 there was pelvic deformity. He concludes by saying that the increased danger of first confinements in elderly women is not due to the mere increase in age, but that among women so situated one is more likely to find deformity of the pelvis, etc., or, in other words, that women with such deformities are less likely to marry or have connexion than are well-formed women.

ON ECLAMPSIA, by Fr. Shauta, Vienna (*Archiv für Gynäk.*, xviii. 2).—This paper is founded on an analysis of 342 cases of eclampsia occurring among 134,345 births (0·25 per cent.) in the second clinique at Vienna during a period of 44 years. The following are among some of the conclusions at which the writer arrives: —In every 100 cases 82·6 were primiparæ and 17·4 multiparæ. Death-rate, 36·5 per cent. Mortality of the children of primiparæ affected, 18·3 per cent.; of multiparæ, 27·2. Death-rate of primiparæ to multiparæ as 37·3 to 44·8. More cases get worse after the uterus is emptied than get better. In cases occurring ante-partum, where delivery was left to nature, 10 per cent. died; in cases where assistance was rendered (forceps, etc.), 90 per cent. died. In cases occurring during labour 26·4 per cent. of the former class, and 40·9 per cent. of the latter died. Of 125 cases where the urine was examined, albumen was found in 107 and was absent in 18. In the majority of the cases it disappeared within two weeks post-partum. In 63 cases carefully examined post-partum, 47 had anæmia and œdema of the brain, 10 had apoplexy, 46 had Bright's disease (28 chronic, 16 acute); in 13 cases the kidneys were normal; in no case was the brain normal. After giving numerous tables, the writer discusses the question of the connexion between albuminuria and eclampsia.

ACCIDENTS TO THE PERINEUM AFTER PARTURITION, by J. Hibbard, M.D. (*The American Practitioner*, August 1881).—The writer carefully records two cases in which, though the perineum was uninjured during the delivery, it slowly, and without producing any symptoms, sloughed away during the lying-in period. He points out how seriously doctors may be blamed as a result of such an accident, and alludes to two cases reported by Matthews Duncan in his paper on the female perineum.

COMMUNICATION ON POLYPOID PROLAPSE OF THE PLACENTAL AREA, Dr Jastrebow, St Petersburg (*Centbl. f. Gynäk.*, No. 3, 1882).—In a case that died of pyæmia, the writer found what was apparently a placental polypus, but was really a portion of the placental site that had bulged into the uterine cavity. Old-standing inflammation of the cervical nerve ganglia, with secondary fatty degeneration of nerve cells, was found, and to this the writer attributes the lesion, which he considers was brought about by local paralysis of the uterine wall. The condition has been called "atonia uteri placentasis partialis."

OBSERVATIONS ON STERILITY IN THE MALE, Dr Sinéty, Paris (*Gaz. Méd. de Paris,* 1881, No. 22).—In three cases of sterile marriages, after satisfying himself that the wives were not to blame, the writer examined the semen from the husbands—two of whom were phthisical—and found that, while there were plenty spermatozoids, they were either dead at the time of emission or died shortly afterwards.

THE MUCOUS MEMBRANE OF THE UTERUS DURING MENSTRUATION, Dr Sinéty (*Gaz. Méd. de Paris,* 1881, No. 13).—The writer's observations exactly coincide with those of Möricke reported in the *Retrospect* for January, viz. :—During menstruation the uterine mucosa remains intact, and there is not a trace of any desquamative process.

CAPILLARY DRAINAGE OF THE PERITONEUM, F. A. Kehrer (*Centbl. f. Gynäk.*, No. 3, 1882).—After reviewing the various methods employed for securing drainage of the peritoneum after operation, the author recommends that of Hegar, and suggests as an improvement the use of a double glass drainage-tube resembling a tracheotomy tube, with blind ends like a test-tube, but with numerous apertures in the sides. The inner tube is packed with strings of worsted or some such material, and can be easily slipped out and refilled, without disturbing the other, when the capillarity of the packing is destroyed.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

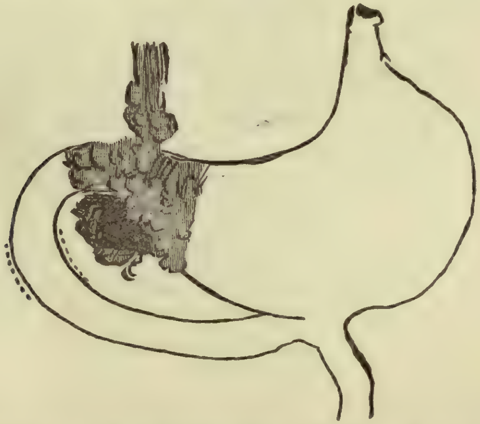
HEREDITARY DENTAL SYPHILIS IN CHILDREN.—M. Parrot's researches in this direction have convinced him that a large proportion of the dental changes in children which he has described arise during the intramaxillary formation of the teeth, and that they have no connexion with the ordinary diseases of early life, but rather owe their origin to an inherited dyscrasia, viz., syphilis. He regards rickets as the last stage in the course of hereditary syphilis. The dental changes in question are all atrophic in their nature, and may be distinguished as follows:—1. Cuspid atrophy: constant changes in the cusps of the first molars (first dentition), consisting in diminution in size and alteration in colour and consistence. The molars of the second dentition are also often affected. 2. Cupulary (crateriform) atrophy; affects chiefly the upper middle incisors of the first dentition. Defects in and confluence of the enamel may give rise to complete "*atrophie sulciforme ou en sillon*" (furrows). 3. The rarer "*atrophie en hache*," which attacks the necks of the upper central incisors of the first dentition, and gives the affected tooth the appearance of a small axe. 4. Atrophy of the free border of the incisors, etc., already described by Hutchinson. These affections lead later on to caries and destruction of the teeth, whilst at the same time the jaw is in so far altered through this imperfect dental development that a secondary atrophy of the maxillary margins, such as one sees in old persons, takes place. (*Gazette des Hôpitaux.*)—Rosenbach, in *Centralblatt für Chirurgie.*

THE MICROCOCCI OF LUPUS.—For more than a year past I have examined microscopically every fresh case of lupus which has come under my notice; and though at first the results obtained were meagre and unsatisfactory, owing to defects in preparation and unsuitable staining reagents, I have at length succeeded in clearly demonstrating what I had for some time suspected, the presence, viz., of micrococci in lupus tissue. In order to avoid any accidental contamination with these organisms, each piece of the affected tissue was placed, immediately after removal, either in a watery solution (2 per cent.) of carbolic acid or in absolute alcohol after rinsing with the carbolic solution. With Roy's freezing microtome sections may be immediately cut from the carbolized preparations, whilst those in alcohol must first be washed in a solution of the acid. The sections, having again been laid in alcohol, are treated with a one per cent. solution of gentian violet (Weigert), and finally put up in glycerine or clove oil. Preparations kept in Müller's fluid may be manipulated in the same manner. The staining fluid only attacks the micrococci, which thus stand out in clear contrast with the colourless, transparent, connective tissue around. Only the thinnest and most carefully stained sections are of use for examination. The micrococci must be sought in the smaller lupus nodules which lie scattered in the connective tissue near to and under the coarser masses. On inspecting the groups of small cells which form the nodules, and the large, pale, flattened, epithelioid, solitary cells which accompany them, with a magnifying power of from 660 to 1020 diameters, we regularly find spherical micrococci granules lying between and around the cells and cell-groups. From peripheral points in one group lines of granules extend through the surrounding areolar tissue to neighbouring groups. The granules, on the whole, are not so closely set as in some other acute infectious processes, and they are smaller than the micrococci I have observed in cases of infectious osteomyelitis; but, nevertheless, in a good preparation they stand out with great clearness, and may be recognised in the smallest and most remote tubercle. In many preparations I found them grouped around the large single epithelioid cells which lay in the vicinity of the smaller lupus nodules. Each cell forms the centre of a small aggregation of micrococci, short rows of which radiate in all directions into the tissues around. When the large cells lie closer together, rows of micrococci extend from one to another, and stellate groups are seen where the lines cross. The single large cells with their surrounding micrococci may probably be regarded as the foci from which new lupus nodules are developed. In the larger and completely formed lupus tubercles, where the cells are massed compactly together, micrococci are much more difficult to recognise; but even here, in very thin sections, I have succeeded in discovering them. Larger connected masses of these organisms I found in a centrally degenerated nodule from a case of lupus of the lip. Here, between the giant cells, lay large, round groups of granules with isolated offshoots, as well as spindle-shaped collections of spores between the layers of connective tissue which encapsuled the nodule on one side. Micrococci are easily made out, as a rule, at those points in the circumference of the larger lupus nodules, whence long rows of cells stretch like rootlets into the surrounding tissue. The terminations of such offsets I always found surrounded by micrococci, which, however, here lie more loosely aggregated, and are connected with neighbouring isolated micrococcus-groups in a manner similar to that already described. I scarcely ever failed to find micrococci in the hyperplastic sebaceous glands of the affected area. They were sometimes found in the hair-sheaths and around the coils of sweat-glands, but here, as a rule, only when these tissues were pressed upon by adjacent cell masses. Micrococci were also clearly made out within the walls of the smaller bloodvessels which were encompassed by round epithelioid cells. The condition of the granules in all these various situations is precisely similar to that of the micrococci in the smallest lupus tubercles above described. They lie around the cells and send off short processes (lines of granules) which here and there form a graceful network in the areolar matrix. In a case of lupus nasi with superficial ulceration, the hyperplastic cutaneous papillæ between the broken-down lupus nodules were, I found, swarming with micrococci. In conclusion, I believe that the following points may be regarded as certain :—The more rapid the development of the disease (lupus) and the softer the subjacent tissue, so in proportion will micrococci be found more distinctly and in greater abundance. I saw them most satisfactorily in preparations from rapidly-growing lupus of the face, lips, and nose, but less so in those old, hardened lupus patches observed here and there on the skin of the extremities.—Max Schüller, in *Centralblatt für Chirurgie.*

CROUP AND DIPHTHERIA, AND THEIR TREATMENT IN THE SURGICAL CLINIC AT HEIDELBERG.—V. van der Plaats defines as "croupous" those cases in which the pharynx is either not at all or only very slightly affected. From 1st January 1877 to 1st July 1880 observations were made on 113 cases of these diseases in the Heidelberg clinic. Of local remedies, aq. calcis and hydrochloric acid (5 : 30) were the chief. If catarrhal inflammation of the mucous membrane was severe, a 2 per cent. solution of chlorinated potash was used as an inhalation; if membrane was present, lime-water was exhibited in the same form. It appears from Plaats's experiments that lime-water is a better solvent for the false membrane than either lactic acid or potash chlorate. Internally, as expectorants, preparations of ipecacuanha or senega were employed, but great attention was paid to keeping up the general strength with various wines and nutritious fluid foods. Tracheotomy was had recourse to as soon as symptoms of dyspnœa appeared, and of the 113 cases 93 were thus operated upon. Of these, 57 died whilst 36 recovered, or a mortality of 61 per cent. Of 20 children in whose cases the operation was deemed unnecessary, 3 died and 17 recovered, a mortality of 15 per cent. The after-treatment of those operated on consisted in the maintenance in the ward of an equable temperature of from 62° to 73° Fahr., whilst the atmosphere was rendered moist by means of spray and damp cloths, sponges being laid over the mouth of the canula. Autopsies were obtained in 54 of the fatal cases. Death was due to pulmonary complications in 38 instances; to capillary bronchitis in 7; to septicæmia in 3; to pleuritis, pericarditis, extension of diphtheria to œsophagus and stomach, diphtheritic destruction of tonsils and glottis, pneumonia with diphtheritic ulcers in stomach, in 1 each (V. van der Plaats, *Inaug. Diss.*, Heidelberg, 1881).—H. Braun, in *Centralblatt für Chirurgie.*

EXPERIMENTAL STUDIES ON PARTIAL RESECTION OF THE LUNG.—Schmid has excised a portion of pulmonary parenchyma (apex) in eight dogs, and three of the animals recovered. Five died, one of acute carbolic acid poisoning, and the other four of acute purulent pleuritis, the result of defective antiseptic precautions. From these experiments, and from a number of operations performed on the human cadaver, Schmid is of opinion that the following conclusions may be drawn:—1. That the technical difficulties in the way of rendering the lungs accessible to operation can be overcome. 2. That operations on the lung tissues are certainly practicable. 3. That hæmorrhage in this situation is controllable. 4. That the conditions for the operation in the healthy human lung are the same as in the dog. 5. That even in lungs where cavities and the firmest adhesions exist, the operation is practicable. Schmid clearly describes the operative procedure, and it depends on the further researches of himself and his colleagues, to whose judgment he has submitted his experiments, whether or not the operation shall be turned to account in the treatment of wounds or destructive processes (such as cavity formation) of the lung.—H. Schmid, in *Centralblatt für Chirurgie.*

GASTRO-ENTEROSTOMY.—I would designate thus an operation which I performed on 28th September, in the case of a patient suffering from inoperable carcinoma of the pylorus. The man, who was aged 38, had been the subject of gastric cancer for six months, and was admitted to Billroth's clinic on 27th September. He was very weak and much emaciated. For three months he had vomited the greater portion of his food, and of late had only been able to take small quantities of fluid. The now considerably distended stomach was washed out once daily. Under chloroform, a tumour the size of an orange was felt in the pyloric region, and the circumstance that it was movable in all directions induced me to make an exploratory incision. On opening the abdominal cavity I discovered that the cancerous pylorus was still freely movable, but that the hepatico-duodenal ligament and the head of the pancreas were infiltrated with the new growth. Under such circumstances a resectio pylori appeared, indeed, practicable, though of a complete extirpation there was no prospect. If I did not wish to close the abdomen without having accomplished anything, the establishment of a nutrient fistula in the small intestine was the only thing to be thought of. The objections to such a procedure are obvious enough:—1st, The due admixture of bile and pancreatic juice is prevented when the fistula cannot be established at the upper accessible portion of the duodenum; and 2nd, the condition of a patient with such a fistula is always more or less deplorable. Accordingly I determined to set up a direct communication between stomach and small intestine, and proceeded in the following manner:—The stomach was opened by an incision, two inches in length in its greater curvature, a finger's-breadth above the insertion of the gastro-colic ligament. I then made



an incision of the same length in a coil of small intestine (opposite to the attachment of the mesentery), and stitched the edges of the wound on the gut to those of the gastric aperture.[1] After disinfection of the whole field of operation with carbolic acid, the wound was closed and covered with an iodoform dressing. Strict antiseptic precautions were used, but no spray, and the stomach and intestines involved were laid during the operation on carbolized sponges. In order that no intestinal contents might escape whilst the operation was in progress, I passed thick silk threads through the mesentery, and tied the gut loosely above and below. This method, devised by Crede, of temporarily obstructing the bowel seems to be both simple and successful. No attempt was made to secure peritoneal drainage. The progress of the case was in every respect satisfactory. There was a total absence of fever, the vomiting ceased, and day by day the patient could take an increased amount, at first of liquid, but from the eighth day onwards, of solid food, without discomfort. The external wound healed by first intention. It is now four weeks since the operation, and the patient passes daily firm, brown-coloured stools. The gastro-enterostomy has cut off the cancerous pylorus from the alimentary path and secured a new passage for the gastric contents, without interfering with the due influence of the bile and pancreatic juice. Various physiological questions arise in this connexion, but whatever theoretical objections may be raised against the operation are set aside by its success. Perhaps further experience may show us that this method of operating is not only applicable to cases of carcinoma of the stomach, but may do away with the necessity for setting up intestinal fistulæ. On 2nd October the same operation was performed by Professor Billroth on a man aged 45, who, like the last case, suffered from extensive pyloric carcinoma. On opening the abdominal cavity the growth was found to extend widely in the direction of the lesser curvature, and also towards the head of the pancreas. The operation, which proceeded smoothly, and occupied one hour in the performance, was followed by no symptoms of peritonitis, and the intestinal tube had evidently remained pervious, for fæcal matters were passed from time to time. Bilious vomiting, however, set in the day after the operation, and continued till the patient's death on 12th October. At the autopsy no peritonitis was visible. The sutured portion of small intestine, which lay only 4½ inches from the duodenum, was firmly adherent to the edges of the wound in the stomach, but the tension on the gut had caused the formation of a "spur," which had divided the lumen of the passage between stomach and bowel (originally 1½ inch in diameter) into two unequal parts. The larger moiety belonged to the upper segment of intestine, that conveying the bile and pancreatic secretion; the smaller to the

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[1] For details of these intestinal sutures see Wölfler, *Ueber die von Prof. Herrn Billroth ausgeführten Resektionen des karcinomatösen Pylorus.* Wien, 1881, p. 23.

efferent or lower half, and lay hidden under the somewhat overhanging right margin of the gastric opening. Thus the secretions referred to had emptied themselves into the stomach instead of into the lower segment of intestine, and so brought about the bilious vomiting. This instructive discovery should show that in future cases our object must be—1st, to choose a coil of small intestine whose relations to the bile and pancreatic ducts we know; and, 2nd, to secure the gut in such a manner that that portion of the lumen which belongs to the afferent limb be covered by an unaltered portion of gastric wall, to which it should be united by a few stitches; whilst, on the other hand, the efferent branch of intestine shall communicate with the gastric cavity through an opening ½ in. or ¾ in. in diameter. That by gastro-enterostomy nutrition may be effectively established is proved by the result of the first case.—Anton Wölfler, in *Centralblatt für Chirurgie.*

A CASE OF PHLEBECTASIS.—A man 42 years old, always healthy, member of a family in which apoplexy frequently occurred, acquired in the course of two or three months a stupid expression of countenance, with, later on, determination of blood to the head, rushing sounds in right ear, giddiness on stooping, and troublesome burning of face. A few days later there was well-marked facial cyanosis, especially on the right side. The veins of the chest on the same side were full and distended, and at the anterior border of the axilla a tortuous varicose vein was visible. In the right supra-clavicular fossa there was a tumour the size of a hen's egg, from whose upper margin the dilated external jugular vein ran upwards. Pressure on this non-pulsating tumour caused it to disappear, whilst the patient experienced loud rushing noises in the ear. On cessation of pressure, the tumour, whose lumen could be traced for some distance into the chest, resumed its former size. There was a similar, though much smaller, tumour on the left side. The heart and other organs were found to be normal. Under daily injections of ergot the swellings rapidly disappeared, becoming flatter and harder, and the subjective symptoms ceased. As a central obstruction of the circulation may be excluded, Lindner is inclined to regard a chronic phlebitis, specially localized in the neighbourhood of the valves, as the cause of the symptoms described. Owing to this process the venous walls become affected in such a manner that they give way under the moderate pressure of the blood-stream, retarded somewhat by the altered valves. (Lindner, *Deutsche Zeitsch. f. Chirurg.*)—Riedel, in *Centralblatt für Chirurgie.*

PROFESSOR BIGELOW published in the *Lancet* of the 24th September last a paper on "Modern Lithotrity," his object being "to show in what the modern operation consists, and to explain the instruments which have made its performance possible; for the removal of a vesical calculus through the urethra is now mainly a question of apparatus, of which certain essential details are new."

We shall cull a few of the Professor's dicta for the benefit of our readers:—"At present anæsthetics are the rule." "Sittings often last half an hour, and have been successfully extended to three hours and more." "As even a single minute fragment left in the bladder may be the nucleus of a future stone, it is important to get rid of it with certainty, and once for all." In speaking on the process of washing out after crushing (which is the important part of the operation, if return of the calculus condition is to be prevented), he says, "It is from the bulb or bottle that fragments are chiefly returned before they settle into the receiver, and not from the tubes." His means of catching the fragments and preventing their return is minutely described. It consists mainly of a ball valve, with the ball playing in a perforated cone. The points on which Professor Bigelow dwells as of most importance are, the large size of the evacuating catheter, and the arrangement described for preventing the return of fragments to the bladder during the process of washing. In regard to the choice of a lithotrite, he prefers one not fenestrated, but with the edges of the male blade sloping so as to throw off fragments to either side, and prevent packing of the instrument. The size must be related to the calculus. "I always crush a last fragment with a small instrument," says the Professor. "While long blades slide easily from the meatus as far as the triangular ligament, the delicacy and skill of a practised operator are needed at this part of the passage. On the other hand, once safely in a bladder of fair size, a long blade has a positive advantage in seizing and crushing the stone." "No lithotrite that can be cleared is drawn out loaded. It is almost universally agreed that fragments can be removed better through a catheter than in a lithotrite." "Evacuation is a simple thing, and is usually successful, even with an imperfect evacuator. To secure the water, I tie an elastic band around the penis after the catheter is in place, and judge of the distention of the bladder by ascertaining, from time to time, the tension of the urethra behind it." "I adopt no special preparatory treatment. If necessary, immediately before the operation I enlarge the meatus or divulse a stricture. Rest after a journey, the relief of some obviously aggravated and temporary symptom, the antiseptic or other washing of the bladder when desirable,—all this belongs to the common principles and practice of surgery." "After the operation, opiates and warm fomentations are often comforting, and sometimes essential. The bladder should be left empty, and, as far as possible, kept so. . . . The bladder may be washed out with water, or mild antiseptic fluid, if the character of the urine suggests it." It is a question "whether modern lithotrity is not better than lithotomy in that class of cases hitherto claimed by lithotomy, comprising larger stones and surgical kidneys, conditions which are distinctly unfavourable to any operation at all. It will take time to decide this point. . . .

But even when lithotomy is successful, I ask myself if the patient would not have encountered a less risk with the new lithotrity."

The Professor describes his own lithotrite, which has a prominent point to the female blade, enabling it to glide more easily along the urethra, and preventing the coats of the bladder from being caught between the blades. The male blade is so fitted, projecting at the heel and sloping at the sides, as to prevent lodgement of fragments and choking of the instrument.

The paper is interesting and instructive, but, to our mind, rather egotistical.

Part Fifth.

MEDICAL NEWS.

The Edinburgh Medical Missionary Society. — Although this Society has been doing a really good work for more than forty years, and has the satisfaction of now seeing the cause which it advocates occupying a front place among the methods of missionary enterprise, we regret to find that it is by no means so generally known among the members of our profession as might be expected. To remedy this a short, carefully written paper is now in course of being sent to every medical man in the three kingdoms; and we are pleased to see that several of our cotemporaries—notably the *Lancet* and *British Medical Journal*—have directed attention to the movement, by highly appreciative editorial notices. We gladly lend our aid, feeling that a cause inaugurated by our illustrious John Abercrombie, supported by Alison, Miller, and Simpson, and already crowned with splendid success, to say nothing of its close accordance with the procedure of Him who was at once the Great Healer and Evangelist in His own sacred person, deserves to be encouraged very specially by those whose privilege it may often be to carry healing and comfort to the souls as well as the bodies of their suffering fellow-creatures.

List of Candidates who were successful for appointments as Surgeons in Her Majesty's British Medical Service at the Competitive Examination in London on the 20th February 1882.

No.	Name.	Marks.
1.	Westcott, S.	2295
2.	Whitehead, H. R.	2280
3.	Skinner, B. M.	2200
4.	Bartlett, C. R.	2195
5.	Reckitt, J. D. T.	2175
6.	Marsh, T. A. P.	2150
7.	Kirkpatrick, R.	2140
8.	Alexander, A. C. A.	2095
9.	M‘Gill, H. S.	2065
10.	Pechell, A. A.	2060
11.	Tyrrell, C. R.	2050
12.	Hickman, J.	1980
13.	Thomson, W. B.	1975
14.	Deane, H. E.	1945
15.	Stuart, S. O.	1940

REPORT OF HOSPITAL AND DISPENSARY AT NÜGATA.

The following is a report of professional work in connexion with the Medical Missionary Dispensary and small Hospital at Nügata, in Japan, by Theobald A. Palm, M.D., during the year 1881. The allusion made to a fire which interrupted his work may be explained. All the mission buildings, including the doctor's own residence, were consumed by a terrible conflagration, which destroyed a great part of the city, in August 1880. This necessarily put an arrest upon his work, more or less complete, for many weeks.

HOSPITAL REPORT 1881.

Number of out-patients, 2027; in-patients, 73.

Operations.—On the Eye—Trichiasis, 26; Enucleation of the eye, 3; Tattooing cornea for leucoma, 2; Iridectomy, 9; Staphyloma of the cornea, 1; Tarsal cyst, 2; for Ectropion, 2; Cataract, 2. *Tumours* — Papilloma of tongue, 1; Cancer of upper jaw, 1; Polypus of uterus, 1; Sarcoma of cheek, 1; Exostosis of tibia, 1; Polypus of nose, 1; Atheroma of scalp, 1; Vascular tumour of cheek, treated by electric cautery; Uterine fibroid, removed partly by ecraseur and partly by knife; Cancerous glands removed from axilla; Hæmorrhoids, 5. Fistula in ano, 6; Imperforate anus, 1; Internal urethrotomy, 1; Necrosis of finger, 3, of tibia, 1, of jaw, 1; Syme's amputation at ankle, 1; Harelip, 2; Tenotomy for club-foot, 2; Excision of tonsils, 2; Paracentesis of pleura, 1; Incision for empyema, 1, for bursitis, 1; Stretching sciatic nerve, 1; Phymosis, 2; Removal of placenta retained for fifty days after abortion. Dent. ext. and abscesses numerous, but not entered.

Remarks.—Of the enucleations of the eye, one was for sympathetic ophthalmia; one was for epithelioma of the lower eyelid spreading into the orbit, which had been previously operated on elsewhere, and had recurred. I removed part of the lids, the eyeball, and the contents of the orbit in the neighbourhood of the epithelioma down to the bone. When seen six months later there were no signs of recurrence. In the third case the patient was being treated for staphyloma of the cornea by Critchet's treatment. She took chloroform badly, moved the head much during the operation, and, as a result, one of the needles broke and left half of it sticking in the eyeball. I could not find the broken half, though searching for it with the help of a magnet, and accordingly enucleated the eye. One of the cases of ectropion was in a child hideously scarred by a burn. I attempted a plastic operation, which failed and left the case as bad as before. The papilloma of the tongue was a very small affair, but caused the patient considerable anxiety; it looked very like epithelioma. I cut it out freely, and applied the actual cautery. The polypus of the uterus was also a very small one, visible at the os uteri, and was simply snipped off with a pair of scissors.

Sarcoma of the cheek I mentioned in a previous letter. It occurred in a child, and caused a very ugly deformity, and was growing rapidly. It was freely removed by the knife, the excised part including more than half the upper lip. A flap was raised from the lower part of the cheek and neck to fill up the gap. It healed well, and the appearance was vastly improved. I have been told since by the Japanese doctor in attendance that the submaxillary gland was enlarging, so that I fear a recurrence.

The vascular tumour of the cheek was also in a child, involving half the face and spreading to the gums. As a kind of last resort, I endeavoured to cause consolidation of the tumour by exciting inflammation in it by inserting into it at numerous points platinum wire rendered candescent by electricity. The case was seen once in the country, the electric cautery with which the operation was done being the property of the Japanese doctor in charge. I operated only on a part of the tumour, and left him instructions to watch the effect and repeat the operation. I have not seen the case again, but am told that the tumour is much reduced in size.

The uterine fibroid was a large one, hanging outside the body by a pedicle as thick as a finger, and dragging considerably upon the uterus. The poor patient had been in that predicament for six weeks before applying for relief, was much emaciated, and so weak that she could not stand. I had her put upon the operating-table at once, and endeavoured to remove it by the ecraseur, but the pedicle was so tough that the wire of my ecraseur gave way, and the operation was completed by the knife. The actual cautery was applied to check the hæmorrhage. From that time she gradually improved in general health, and was soon able to walk. A few days after the operation she complained of hæmorrhage, which I found proceeded from a ragged-looking ulcer deep in the vagina, behind the cervix uteri. It was treated with iodoform applications, and somewhat improved in appearance, but the slight induration around the ulcer increased and spread, and it was evident that the case was complicated by a cancerous ulceration of the vagina. It bled upon slight provocation, and on one occasion to an alarming extent. After this it was evident to the patient that the prognosis was bad, and she returned to her home, and I have heard no more of her. The irritation of the fibroid dragging upon the parts seems to have been the local cause of the cancer.

The cancerous glands removed from the axilla were from a patient from whom I had formerly removed a cancer of the breast. The glands at that time gave no signs of being involved.

The case of imperforate anus was operated on several days after birth, after fæcal matter had been observed passing by the urethra, showing that communication had been established between the blind end of the rectum and the bladder. A very deep incision and considerable searching was required before a communication was established in the proper quarter, and the little patient did not survive many days.

The cancer of the upper jaw was also an unfortunate case. The tumour was projecting into the mouth from the roof, round and well defined, of slow growth, and showing no tendency to ulceration. It had, however, been previously operated on by a Japanese doctor, but he probably only incised it. I thought it best, under the circumstances, to attempt the removal of the tumour alone without excising the bone. The tumour sprang from the periosteum, apparently, and there was more difficulty than I had anticipated, especially as the hæmorrhage obscured the parts. I removed the tumour, stripping off the periosteum with it, and leaving the bare bone surrounded by lacerated tissues, but without any assurance that I had removed the whole of the disease, which upon examination proved to be a hard cancer. An incision was made in the cheek from the angle of the mouth to afford free access to the tumour for removal. This healed by first intention, and the patient insisted upon leaving the hospital four days after the operation, and has never shown himself since. He was a strong, healthy-looking man, and did not seem to suffer much from the operation.

The necrosis of the tibia was one in which almost the whole shaft of the tibia had necrosed and was being extruded. The patient had himself sawn off a portion of the dead bone and removed it, and it was only necessary for me to release the lower part of it by an incision, and draw it out of its bed with my fingers.

The amputation of the foot was for caries of the bones of the foot of long standing in a middle-aged man. The case was not antiseptic, the chloride of zinc applied at the time of the operation having failed to correct all the existing putrefaction. The wound healed slowly, with scarcely any suppuration, but the patient's general condition did not improve. I could find no organic disease, nor had he the usual symptoms of pyæmia, but some form of blood-poisoning was evidenced by slight fever, diarrhœa, and general failure of strength, and he died five weeks after the operation, and just as the wound was healed.

The empyema was one of long standing, in which I made an incision and inserted a drainage-tube, treating the case antiseptically. The patient was greatly relieved, and, I doubt not, his life prolonged. He was some months under treatment in the hospital, but the discharge of pus from the pleura continued, and he eventually sank under it. My supply of gauze ran out, and it was doubtful whether the antiseptic dressings subsequently used were effective.

Another death in the hospital occurred in a patient who had a most obstinate hæmaturia, the cause of which was never made out. He died suddenly, with symptoms of failure of the heart. No post-mortem examination.

The other cases do not call for any special comment.

You will notice a decrease in the number of patients. This is, I think, partly due to the interruption to the work by the fire, and the numbers do not represent a full year's work. Partly, I think, it is due to the growing efficiency of the Japanese doctors. As a rule, patients do not come to me until after the Japanese doctors have tried their hands on them. One man who was formerly a horse-doctor came to me two or three years ago and attended the dispensary to learn what he could about eye diseases. He learned how to manage the more common cases, learned when to instil atropin and avoid irritants by a few simple rules, and when he went back to his village announced himself as my pupil in eye diseases, set up in practice as a specialist in that department, and, I understand, is now in flourishing practice, and occasionally sends me a case which he cannot manage himself.

The number of in-patients is very small. I doubt whether all the cases have been registered. The principal reason of it is that the in-patients pay for their own board as a rule, though I never send away a poor man who ought to be in, and wishes to pay, but cannot.

CORRESPONDENCE.

NEW SPLINTS FOR TREATING BOW-LEGS.

To the Editor of the Edinburgh Medical Journal.

SIR,—V. A., a bow-legged child, aged three years, came under my care in January; she walked slowly, and the left ankle overlapped the boot so much that it was constantly coming off. For the treatment of this case I asked Mr Gardner, cutler, to construct an apparatus, which consists of a rigid steel rod, fixed above to a thigh-piece made of thin copper shaped to the form of the thigh, and attached below to a foot-piece having a box on it to permit the rod to slide in and allow for any increase in the length of the tibia as it becomes straight. Sliding on this rod, so that pressure can be applied at any point, is a tourniquet screw, having a short leather splint attached to it by means of straps and buckles. This leather splint is placed over the curved portion of the tibia, and, when the screw is tightened, can be made to act very powerfully on it. The rod forms the inner splint and also the fulcrum for the screw, and being slightly convex—the concavity being towards the leg to which it is applied—it gives a better leverage, and prevents the skin from being pressed on.

The splints are applied in the following manner:—The foot and thigh-pieces are attached to the limb by broad strips of adhesive plaster; then a plaster of Paris bandage is applied over the foot-piece, and twisted as it is passed over the box, so as to allow the rod to slide freely. The plaster of Paris is next applied over the thigh-piece. The leather splint, well padded, is then placed over the curved portion of the tibia and secured to the screw by the buckles. The buckles should lie on the leather so as not to press on the skin. Pressure might now be made, but it seems better to wait until the plaster of Paris becomes perfectly hard.

On the 14th February the apparatus was applied to both legs by myself and Mr Gardner.[1]

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[1] I may state that I feel indebted to Mr Gardner for the careful manner in which he worked out the various suggestions. Wings might be added to the inner splint to prevent the straps from touching the skin, and the box should be put on the thigh-piece instead of the foot-piece.

On the 17th February, the plaster of Paris having slipped down on the left knee, the apparatus was removed and some improvements made upon it, and on taking the measurements again it was found that there was an improvement of an inch and a half. For instead of there being a distance of six inches between the anterior borders of the tibiæ—as was the case before the splints were applied—there was now a distance of only four and a half inches.

6th March.—The screws were tightened every day at first, and then every second day. Cotton-wool was applied freely wherever there was the slightest pressure. Now the limbs are almost perfectly straight, and the screws might be removed, but the other parts of the apparatus will be kept on for some weeks. The child suffered little or no pain. It may be added that the handle of the screw is cut and turned into a key, so that the surgeon or the nurse can regulate the amount of pressure at pleasure.

Hoping that I have not occupied too much of your valuable space unnecessarily,—I am, &c., G. R. Gilruth.

Edinburgh, *March* 1882.

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Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Fœtid Parametric and Perimetric Abscess.* By J. MATTHEWS DUNCAN, M.D., etc.

THE following sad case of parametric abscess terminated fatally while chloroform was being administered for its opening. It is here narrated because the resonance of the abscess extended to the thigh, because the abscess led to dilatation of the ureter, and because of some points connected with the communication established between the bowel and the abscess. I derive the facts of the case from notes of Mr Cronk, resident midwifery assistant, St Bartholomew's Hospital.

S. S., aged 45, charwoman, was admitted into "Martha," in St Bartholomew's Hospital, on 23rd April 1881. She had been married 22 years, and had borne eight children, of which the youngest was ten weeks old. She had had four miscarriages, of which the last was two years before admission. She had not nursed, and had not menstruated since her confinement. Two days after delivery she had rigors and pain in the hypogastrium, and she had been ill and unfit for getting up ever since. Seven weeks before admission pains began in the hips and right groin, and had become gradually worse.

Between 23rd April and 14th May, when she died, her pulse varied from 90 to 120, and her temperature rose in the evening to 103° or 104°, and was in the morning 3 or 4 degrees lower.

On admission, the right thigh, which was moved with pain, was kept bent at an angle of about 30°. Decubitus on the left side, the patient's ordinary position when in good health. Nothing except tenderness could be found on examining the hypogastric and iliac regions. Per vaginam, a digital examination found the uterus elevated, moved backwards, and fixed; a dense, tender, only slightly convex, hardness connecting it with the right posterior side of the brim of the pelvis. In the right groin, just below Poupart's ligament, and extending from about the inner third of the ligament outwards, below the iliac spine, and on to near the great trochanter, and extending from above downwards about two inches, was a slight fulness that would not readily attract attention. The part presenting fulness was slightly tender, and gave an indistinct feeling of fluid. The same part also gave to the manipulating fingers a feeling of gurgling, not resembling emphysematous crackling, and it was resonant on percussion.

Lying in bed she became much more comfortable, her symptoms all less severe, about the beginning of May. She was even able to extend the right leg completely for a short time, and she slept on the right side, or that of the disease (the usual decubitus in parametric abscess). But the improvement was evidently not substantial, and she again became gradually and slightly worse. There was no evidence of pus pointing in any part. Around the abscess the tissues became hardened, enclosing it.

On 14th May, after consultation with Mr Willett, it was decided that he should open the abscess. An incision was made below Poupart's ligament, and four or five ounces of healthy-looking pus with fæcal odour were discharged, with some fœtid gas. Nothing of the nature of solid or fluid fæces was discovered. The finger could be passed from the incision below Poupart's ligament to the right side of the pelvic brim.

She had taken chloroform quietly and naturally. After the incision Mr Cronk observed that the pulse gave a few irregular beats and ceased. A long inspiration was followed by expiration and death. Attempts at resuscitation, long and vigorously made by the chloroformist and assistants, failed. The quantity of chloroform used was estimated as a drachm and a half.

Post-mortem, from notes of Dr Norman Moore, pathologist.—Body well nourished. A wound above two inches long in right groin. Abdomen full. Calvarium and meninges normal. Lungs firmly adherent at bases by old adhesions. Heart freely movable in pericardium; valves natural; cavities all quite empty; tissue soft, not mottled; weight nine ounces. Liver normal. Spleen soft, enlarged, weighing seven and a half ounces. Kidneys normal, except the presence of a cyst in the left. Bladder normal. Uterus healthy. Right ureter obstructed, and dilated to a size exceeding that of tense repletion by pressure of thickened tissues in pelvis. Ovaries thicker than normal; in the left a cyst of the size of a hazel-nut. Right psoas muscle infiltrated with pus in its lower part. An abscess in the pelvis, extending from lowest lumbar vertebra, inside the cæcum, which bounded it to the right; on the left it was bounded by thickened matted tissues comprising the uterus and a loop of the sigmoid flexure, which was firmly adherent to it. In this flexure was a small opening which would easily transmit a pin's head, and in the intestine was some yellow pus. Downwards the abscess, enclosed by hardened thickened tissue, extended beneath Poupart's ligament to the upper part of thigh.

It is to be noted that, in this case, the abscess communicated with bowel of the opposite side of the body.

When an abscess is found to contain fœtid pus, it does not generally, on that account, receive the designation fœtid: it is spoken of as an abscess containing or discharging fœtid pus. When, in addition to fœtid pus, an abscess contains fœtid gas, then such an abscess is generally called fœtid; but ordinarily an additional condition is implied in the name fœtid abscess, namely, communication of the abscess with the bowel. No doubt most abscesses containing air do draw it by some opening from the intestines; it is intestinal gas that is in them. But many fœtid abscesses—that is, abscesses containing fœtid air—have no communication with the bowels, and of such we have often examples in "Martha."

When, in addition to fœtid air, an abscess contains or discharges solid or fluid fæces or other matters that pass along the intestinal canal, then intercommunication of abscess and bowel is certain. An opening has taken place, allowing of (but not necessarily followed by) mutual interchange of contents between the two: and the abscess is called fæcal.

The discharge of pus from a perimetric or parametric abscess into bowel is generally recognised by the diminution of the abscess and the appearance of pus in the stools. If, however, the opening of the abscess is high in the intestinal canal—as, for instance, in the small gut, or if the amount of pus discharged is very small, as in the case narrated—there may be no pus seen in the stools. The discharge of air from an abscess into the bowel cannot be recognised except by sudden diminution of amount of air in the abscess.

Air in a perimetric or parametric abscess may be derived from the abscess wall, from decomposing pus or blood, or from the intestinal contents through a channel of communication between the abscess and bowel; and the last is the most frequent source.

Before a fœtid abscess is opened the source of the gas cannot be decided. Some circumstances may make it probable or improbable that it is derived from the bowel, namely, the region occupied by the abscess, the sudden or slow appearance of a large quantity of gas in the abscess, the more or less distinct feeling of fæces in it. After the opening, or at the time of opening, the source of the fœtid air may be made plain by the discharge of fluid or solid fæces or other matters derived from the intestine.

When pus and fœtid air alone are discharged from such an abscess, there is difficulty in deciding the interesting question of the source of the fœtid air. We have held that the air was not derived from the bowel when it was discharged with considerable force at opening, when it was discharged only at or near the time of opening, when the odour of the gas was only putrid, not distinctly feculent, and when the abscess healed in a usual way. But these conditions, when present singly or combined, do not settle the point.

Air passing from the bowel into an abscess generally enters a cavity in which it is securely enclosed; but it is possible that it may permeate the cellular tissue emphysema-like; and, in the case narrated, Dr Godson described the earliest feeling of the air-containing part as that of emphysema. When I first saw the case the feeling was distinctly not that of emphysema, but of air-gurgling, and it suggested the presence of hernia, an idea which was excluded by the remote and peculiar position of the air-gurgling and of the resonance on percussion. But it is quite possible that emphysema in these parts preceded suppuration or extension of abscess into them, and that what Dr Godson felt was true emphysema; and it has, in connexion with this emphysema anticipating abscess, to be noticed that at first the air was surrounded by no hardened tissue such as appeared subsequently and formed a distinct boundary at last to the abscess.

This case and many others illustrate the passage of air alone from the bowel into the abscess; and I believe this to be a matter of great importance in some cases. In cases which have two openings, the second opening being made by nature or artificially as in our case, the passage even of fæces into the abscess is not of first-rate importance, for the feculent matters can pass out of the abscess, and the abscess heals well. I have put on record a case of parametric abscess bursting into the rectum, in which the abscess became repeatedly filled and again partially emptied of fæces and air, so illustrating the passage out of the abscess of fæces even when there was only one opening. But such evacuation of the abscess would surely not be complete; some feculent particles or masses would remain. In parametric and perimetric abscesses having only an opening into the bowel and containing only fœtid gas in addition to pus, there may be sapræmic symptoms long present; but the abscess may heal, the air being absorbed or expelled. But when fæces are in such an abscess they are not likely to be expelled, and cannot be absorbed; and, besides, in cases which I have examined post-mortem the fæces evidently caused great inflammation of the abscess wall, and sometimes even sloughing.

When a communication is established between a parametric or perimetric abscess and bowel, the process is ordinarily described as the bursting of the abscess into the bowel. The behaviour of a subcutaneous abscess is invoked, and the perimetric or parametric abscess is supposed, like most subcutaneous abscesses, to point and actively burst. But in all this there is too much assumption or mere guessing.

In many cases there is good evidence of this being the real course. The abscess may be felt bulging into the bowel, pointing, and the discharge is sudden and copious when the opening takes place. A similar course is followed in many abscesses opening into the bladder or discharged per vaginam. But this course, though common, is far from being a universal rule.

In some cases, as in that recorded here, there never is any tension of the abscess walls, never any visible pointing nor reason to suppose it. Ulceration, probably, in my opinion, beginning in the abscess cavity (*i.e.*, at the peritoneal surface in perimetric abscess), establishes a communication between cavity and bowel. There is no active discharge into the bowel, but a little pus may pass the opening. There is no discharge into the abscess from the bowel, but air may pass from the latter into the former.

The physical properties of gases give them a power of passing which renders their entering the abscess practically easier than the entering of liquids, and still more of solids. But liquids and solids may pass into the abscess-cavity. I cannot, however, admit that liquids or solid fæces, although they may pass or be drawn into the abscess cavity, can, except in a very rare combination of conditions, be propelled or burst into it. In other words, while an abscess often bursts into bowel, bladder, or vagina, it must be extremely rare for anything to occur like a bursting of bowel, vagina, or bladder, into an abscess-cavity. The passage of liquids and solids into abscess-cavities (or ovarian cysts) from these viscera I have elsewhere discussed (see my work on *Perimetritis and Parametritis*, p. 167), and I shall here only repeat the utter inapplicability of the valvular theory ascribed to Dupuytren and extensively adopted, a theory implying such an opening as permits in most cases only of liquids to leave the abscess, not anything to enter it. This theory cannot be entertained by any one who has seen the actual openings. The existence of communication between replete cavities without any active interchange of contents from one to the other, or *vice versâ*, is illustrated in the fœtal heart, in abscesses communicating with arteries, and in other cases.

Before concluding, it is to be remarked that no symptoms distinctly referable to the dilatation of the ureter were noted. Yet it is possible that pains about the hips, which the patient described as coming on in the course of her illness, may have been due to this obstruction to the flow of urine; and in other cases of urethral dilatation I have connected with this pathological condition pains in the hips and flanks, and urine sometimes copious, generally of low specific gravity.

ARTICLE II.—*Cranial Injuries.* By JOHN CHIENE, F.R.C.S.E., Surgeon, Edinburgh Royal Infirmary.

(*Read before the Medico-Chirurgical Society of Edinburgh, 1st March* 1882.)

CRANIAL injuries have assumed a special interest since the investigations of Ferrier and others have been published. A careful record of the symptoms observed during life, and a careful description of the injured areas when the cases terminate fatally, will throw light on a most interesting branch of cerebral physiology and pathology. Three cases have lately come under my notice, and, with the assistance of my late house-surgeon, Mr Dobie, and my present house-surgeon, Mr Gibson, the symptoms have been carefully noted.

These injured areas were in all three cases on the left side. In the first case the injury was in the parietal region; in the second, in the temporo-sphenoidal; in the third, in the frontal region. The first case recovered; the second and third terminated fatally

CASE I.—A. M., aged 7, admitted to the Royal Infirmary on the 1st of January 1881, sent to Dr Brakenridge's ward on the 19th of February 1881.

History.—At midnight on the last day of the year 1880 a bottle was thrown from a height of four stories, and landed on the vertex. The patient fell backwards, was picked up, and brought to the hospital. 12.30 A.M.—Partially sensible, cried when the wound was examined. Face pale; pulse 56; pupils equal, sensitive to light. Two scalp wounds were found, one over the left parietal eminence, another over the anterior superior angle of the left parietal bone. These wounds communicated with a depressed comminuted fracture of the skull (see woodcuts 1 and 2). The depressed area began in the middle line, half an inch behind the centre of the sagittal suture; it ran directly outwards for an inch, and then passed obliquely downwards and forwards for two inches. This depression was of elongated form, of the nature of a sulcus, in which the finger could be placed. In front of this sulcus a depressed area of circular form, and somewhat larger than a florin, could be felt. The fracture was treated antiseptically; catgut drainage and horse-hair sutures were used. 9 A.M.—Pale, apparently insensible. 3 P.M.—Wound dressed. Very free serous discharge, stained with blood. Extensive extravasation around left eye. 10 P.M.—Looked up, and appeared to recognise bystanders.

2nd January, 12 *o'clock midday.*—Sensible, but did not speak. Throwing about *left* arm, and clutching hold of bedclothes and sides of crib. Right arm and leg paralyzed.

3rd January.—Wound dressed. Left arm still thrown about; right arm and leg drawn up in a condition of spastic contraction.

4th January.—Quite sensible; can recognise people; understands what is said. Complete aphasia. Cannot at will protrude the tongue; when asked to do so, patient contracts his tongue. He protruded his tongue when coughing. Complete paralysis of motion of right arm and leg. Spastic condition of flexors of right leg and flexors of right forearm. Motor power of left leg impaired; plantar skin reflex diminished on right side, but tendon reflex normal. Right facial paralysis; spastic condition of facial muscles; right angle of mouth drawn up; left arm thrown about in a restless manner; this symptom less marked than on previous day.

6th January.—Spastic condition of right side less marked; left arm less restless.

7th January.—Can protrude tongue with hesitation and difficulty; it is directed to the right side. Can say "Ay," and makes attempt to pronounce his name.

8th January.—Can speak with hesitation. Facial paralysis and spastic condition of both face and right arm and leg almost gone. Sensation normal.

12th January.—Has completely regained power of speech and protrusion of tongue. No motor power in right leg; little power in right arm; can move fingers of right hand slightly; wound nearly healed.

13th January.—Passive movement and friction to be employed twice daily.

15th January.—Wounds healed. Fair motor power in left leg, none in right; plantar skin reflex diminished on right side. No exaggeration of tendon reflex.

18th January.—Can flex his right forearm; motor power in right leg returning.

21st January.—Marked improvement in motor power of right arm and leg; can flex fingers and flex leg on thigh; slight power of supination and extension of forearm.

24th January.—Great improvement in movements of arm; can extend forearm fairly well; spastic contraction of left arm (?).

26th January.—Improvement in movements of right leg.

28th January.—Can elevate arm at the shoulder-joint.

3rd February.—Up and dressed, but cannot walk or stand alone.

5th February.—Muscles round right knee rigid.

9th February.—Apparent want of co-ordination of movements of right side.

15th February.—Movements of right arm and hand improved; want of co-ordination of right lower limb, flexors and extensors contracting simultaneously.

19th February.—Sent to Dr Brakenridge's ward. His condition was noted as follows:—Aphasia gone; control over tongue normal; left side normal; can flex right arm with difficulty; power of supination and pronation imperfect; rigidity and atrophy of muscles of right lower extremity; cannot bear any weight on right leg, therefore unable to walk.

Remarks (see woodcuts 1 and 2 at end of paper).—In addition to the depressed areas, there is little doubt that extravasation of blood occurred along the fissure of Rolando, extending down to oro-lingual centre and forwards into area 5. Clot in all probability less marked furthest from injury to bone. It is to be noted that the aphasia first disappeared, then the facial paralysis, and that the arm improved before the leg. Dr Brakenridge intends to publish the future history of this case. It is also to be noted that on the second day the patient moved the *left* arm and leg restlessly, the arm and leg *on the same side* as the injury. In fact, this symptom is to be noted in all three cases at one or other period of their history.

Case II.—D. M., aged 25, admitted 12th February 1881. At 2 A.M. the patient was found lying on the ground and brought to the hospital. He was seen in the waiting-room, roused without much difficulty, smelling strongly of drink, gave his name; no external injury; walked out of the hospital.

At 4 P.M. (fourteen hours after first seen) patient was brought back to the hospital. 5 P.M.—Body and extremities warm; temperature 99°; pulse 60; respirations 16; unconscious; pupils equal, sensitive; conjunctiva of right eye insensible; left eye sensible. 7 P.M.—Slight right facial paralysis; partial impairment of movements of right arm and leg; left arm thrown about restlessly; could not be induced to speak; sensible to pain. 7.30 P.M.—Head shaved; painful spot on left side above ear. 8 P.M.—Ice-bag to head, and four leeches over left mastoid process; skin reflex less on right than on left leg; patient violent, with difficulty held in bed; restless movements of left arm and leg, and of head. 8.15 P.M.—Breathing laboured; deep inspirations; *great irregularity in heart's action.* 8.30 P.M.—*Free perspiration* over whole body. 9 P.M.—Pulse 56; respiration 31; very violent. 9.30 P.M.—Pulse 60; respiration 28; breathing very laboured. 9.45 P.M.—Apparently choking; by drawing forward tongue breathing relieved. 10 P.M.—Passed water. 10.15 P.M.—Pulse 62; respirations 21. 11.15. P.M.—Pulse 62; respirations 26; quiet; *free perspiration;* breathing more easily. 11.25 P.M.—Pulse 72; respirations 27; pupils unequal; left pupil slightly sensible to light; conjunctiva of left eye sensitive; *heart beating violently; pulsations evident in carotids, brachials, and radials, and in external jugular vein and in veins on backs of hands; pulse very irregular,* at intervals rose to 120; left side of body restless; partial paralysis of whole of right side. 11.40 P.M.—Pulse 90; respirations 30; convulsive twitchings of right side of face; breathing less laboured. 11.55 P.M.—Three leeches applied over angle of left jaw.

13*th February.*—12.35 A.M.—Pulse 140; heart beating violently; breathing easily. 12.40 A.M.—Pulse 80. 2 A.M.—Pulse 72; respirations 32; *profuse perspiration;* pupils irregular; cutaneous congestion; irregular breathing. 9 A.M.—No change during night; temperature 104°·2; pulse 108; respirations 32. 9.30 A.M.—Pupils equal, dilated, insensible; conjunctivæ congested. 11 A.M.—Comatose. 12.15 P.M.—Temperature 107°·4; pulse 160; respirations 5. 1.30 P.M.—Died, 36 hours after patient was first seen.

Temperature, 13 minutes after death, on left side, 106°·4; 17½ minutes after death, on right side 106°·4.

Post-mortem Examination by Dr Hamilton.—Extravasation under sheath of left temporal muscle. No depressed fracture Under calvarium, superficial to dura mater, a large recent clot pressing upon lower half of ascending frontal convolution, lower two-thirds of ascending parietal convolution, posterior half of first and second temporo-sphenoidal convolutions, marginate convolution, and angular convolution. Fissured fracture from foramen spinosum to point opposite centre of clot. Hæmorrhage into, and great congestion of both lungs. Other organs healthy.

Remarks.—It is matter of regret that trephining was not performed over tender spot above left ear. No fracture could be felt, and the evidences of tenderness were by no means marked. The irregularity of the heart's action and respiratory functions deceived me, and I was of opinion that the fracture, if present, extended across the base of the brain, and that the eighth pair of cranial nerves were pressed upon by blood-clot. The woodcut (Figs. 1 and 2) indicate the exact position of the clot. Its size was so large that the whole brain tissue was pressed upon. Those important nerves were in this way indirectly interfered with; hence the early implication of the heart and respiration. The free perspiration indicated vaso-motor disturbance. It is to be regretted that no note was taken of sight and hearing, as the clot pressed upon areas 13 and 14 of Ferrier, which are said to be connected with sight and hearing.

CASE III.—J. C., aged 51, admitted to the Royal Infirmary at 3.30 P.M. on the 11th of February 1881.

History.—Half an hour before admission the patient was struck by a pistol bullet on the forehead, 2¾ inches from the fronto-nasal suture, ¾ of an inch to the left of the middle line. On admission, one part of the bullet was found below the scalp; the remainder was discovered in the brain, 4 inches from the opening in the calvarium, at the post-mortem examination. On admission, seven pieces of bone were removed from the substance of the frontal lobe, 2 inches from the surface. One piece was removed at the post-mortem examination. After the removal of the fragments of bone the patient did well for fifty hours. Then a rise of temperature to 102°·8, with the escape of diffluent brain substance mixed with blood, took place. The patient complained of severe pain in the head. During the last twelve hours of life it was estimated that three tablespoonfuls of brain substance escaped. The patient died of inflammation of the brain, seventy-two hours after the accident.

Post-mortem Examination by Dr Hamilton Twenty-two Hours after Death.—Opening in scalp ⅜ of an inch in diameter. The wound in the skull was situated ¾ of an inch to the left of the middle line, and 2 inches in front of the coronal suture. On removing the dura mater it was found that an extensive loss of brain substance in the left frontal region had taken place. The area of loss was circular, and measured 1½ inches in circumference. All three frontal convolutions were implicated. The bullet was found lying in the anterior part of the transverse fissure, slightly internal to the uncinate gyrus. To reach its destination the bullet had passed through the following parts:—The superior frontal convolution, half way between its posterior extremity and the anterior extremity of the brain, the corpus callosum, the anterior part of the lateral ventricle, and the corpus striatum. It lay in the temporo-sphenoidal lobe, close to the uncinate gyrus.

Symptoms observed during Life—Half an Hour after the Accident.—Patient semi-comatose; easily roused. Pulse 60. Temperature 97°. Unable to speak intelligently, but understood what was said, and made efforts to answer, but failed to form the words. Spastic condition of right arm, more especially of flexors of upper arm. Surface warm. Pupils slightly contracted; equal; answer to light.

Four Hours after Accident.—Spastic condition of right upper extremity; right lower limb normal. Right facial paralysis. Apparent insensibility of right conjunctiva. Left side of body normal. Semiconscious, and attempted to answer when spoken to; but either could not find the words or was unable to speak. Tongue protruded to right side. After the removal of the fragments of bone, patient made attempts to answer with thickly expressed words. There did not seem to be aphasia.

Fifteen Hours after the Accident the pulse was 78. More sensible; *quite intelligent.* Drowsy; occasionally breathing heavily. Right orbicularis more powerful than at previous examination. Both conjunctivæ sensible. Tongue protruded when asked, most markedly to right side. Spastic contraction of right arm almost gone; powerless, cannot grasp with right hand.

Twenty Hours after the Accident.—Can now grasp feebly with right hand. Speaks more distinctly. Right orbicularis stronger. Buccinators equal in strength. Tongue protruded to right.

Forty-four Hours after the Accident.—More intelligent. Speech improved; tells her name and age. Pupils contracted; equal; answer to light. Grasp stronger. When asked to touch her nose with right hand, she lifts her hand to left cheek, and then assists it with left hand. Right biceps still a little resistant. No paralysis of either leg. No increase of tendon reflex. Tongue protruded to right side; cannot carry it to left. Cannot open her eyes widely. When asked to follow finger held in front of her face, she can do so in every direction except to the right side, in which direction she cannot carry either eye beyond its mesial vertical plane; turns her head more easily to right than left. Pupils still contracted. (These symptoms indicate an interference with area 12 of Ferrier. See woodcut.)

Fifty-three Hours after Accident signs of inflammation showed themselves. Patient irritable; complained of pain in the head. Pupils more contracted; does not open her eyes to normal width; cannot shut right eye firmly. Right hand and arm quite free from spasm. No increase of motor power in arm.

Sixty-three Hours after Accident.—Pulse 74. Temp. 100°·8. Opens her eyes when spoken to, but can only say "Ay" with difficulty when asked if head pains her. *Left* arm very restless; both flexors and extensors acting; sawing movement; grasping bedclothes with left hand. *Left* leg moved a great deal; the muscles brought into action as in walking. Right leg hardly moved at all.

FIG. 1.

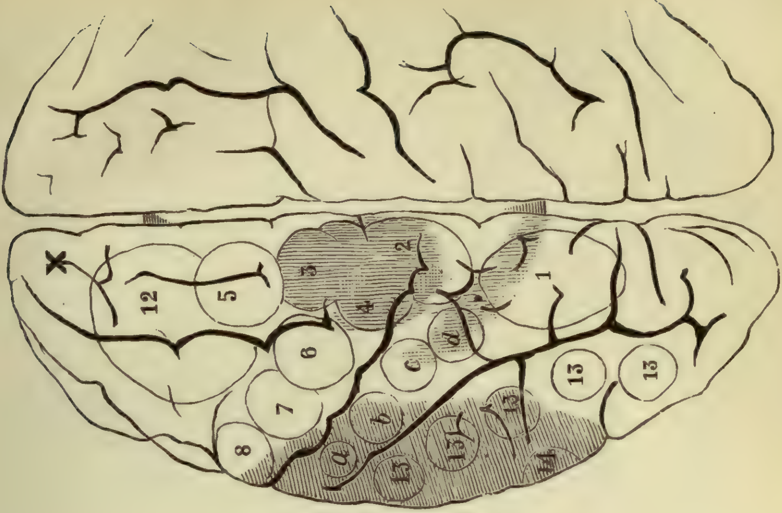

FIG. 2.

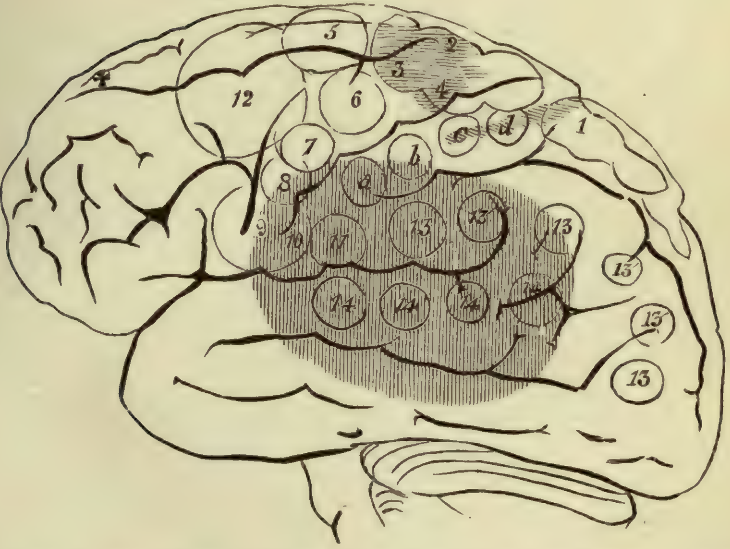

Fig. 1.—Upper surface of brain, after Ferrier, indicating the motor areas and the injured areas in the cases just described.

Fig. 2.—Lateral view of brain, after Ferrier, with motor areas and injured areas indicated.

The injured areas in Case I. have been shaded horizontally, implicating areas 1, 2, 3, 4, and *c d*. The shaded portion indicates as accurately as possible the areas of depressed bone. The position and size of the clot in Case II. is indicated in the temporo-sphenoidal area, and shaded *vertically*, implicating 8, 9, 10, 11, 13, 14, *a*, and *b*.

The aperture of entrance of the bullet in Case III. is marked by a ×.

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[1] According to Ferrier, the areas are as follows:—1, Lower limb on opposite side, as in walking. 2, 3, 4, Complicated movements of both limbs and trunk on opposite side, as in swimming. *a*, *b*, *c*, *d*, Prehensile movements of opposite hand. 5, Extension of opposite forearm. 6, Supination and flexion of opposite forearm. 7, 8, 11, Facial muscles of opposite side. 9, 10, Oro-lingual area on opposite side. 12, Elevation of upper eyelids, dilatation of pupils, turning of eyes and head to opposite side. 13, Vision. 14, Hearing.

FIG. 3.

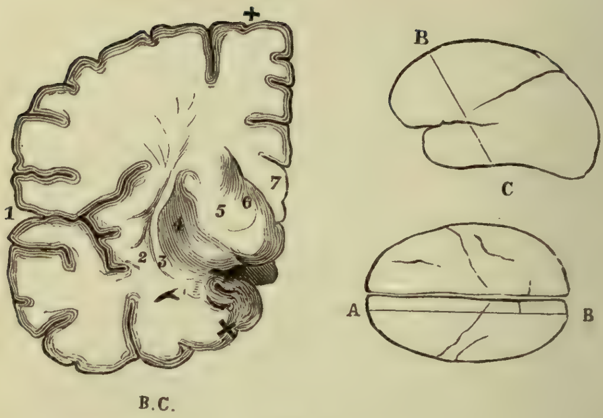
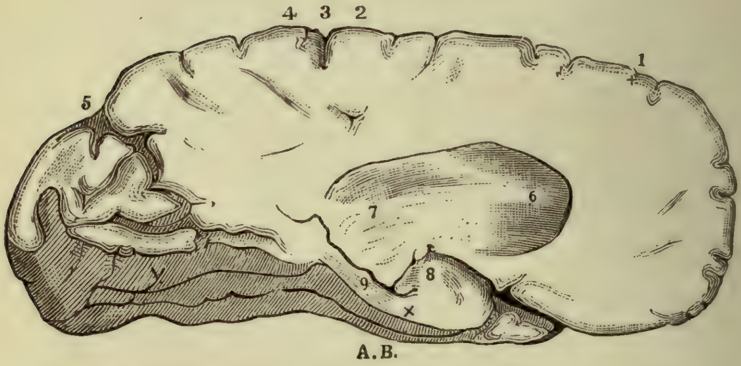


FIG. 4.



Figs. 3 and 4 are drawings by my pupil, Mr A. T. Thompson, of sections of a brain, to illustrate Case III.

Fig. 3 is an oblique transverse section through frontal region in line B C. The + at upper corner of section indicates point of entrance of bullet; the × at lower internal corner indicates position of bullet. 1. Silvian Fissure. 2. Claustrum. 3. External Capsule. 4. Lenticular Nucleus. 5. Internal Capsule. 6. Caudate Nucleus. 7. Corpus Callosum.

Fig. 4. Is a vertical antero-posterior section in line A B, ¾ of an inch to left side of mesial plane. 1. Indicates entrance of bullet. 2. Ascending Frontal Convolution. 3. Fissure of Rolando. 4. Ascending Parietal Convolution. 5. Parieto-occipital Fissure. 6. Corpus Striatum. 7. Optic Thalamus. 8. Uncinate Gyrus, with × indicating situation of bullet. 9. Gyrus Hippocampi.

Right arm powerless and motionless. The patellar reflex greater on left than right side; very slight on right. Left leg offers more resistance to passive movement than right leg.

Sixty-six Hours after Accident.—Temp. 102°·8. Breathing stertorous. Pupils unequal; insensible; right pupil below medium size; left widely dilated.

Patient died seventy-two hours after accident. Great vascular dilatation of cheeks and chin for last two hours of life. Temperature ten minutes after death 101°·4.

Remarks.—This case may be divided into two parts:—1*st*, the symptoms observed during the first fifty hours, which may fairly be referred to the injury; 2*nd*, the symptoms from that time onwards until the death of the patient. The symptoms during the latter period were evidently connected with the inflammation which occurred as a result of the injury. The most interesting question raised in this case is, What relation had the track of the bullet to area 12 of Ferrier? There can be little doubt, if the symptoms observed by Dr Brakenridge and myself forty-four hours after the accident are studied, that there is a very striking clinical corroboration of the statement of Ferrier with regard to the functions of 12 area. The facts with regard to the movements of the eye are specially worthy of note. The opening of the eyes must be accepted with caution, as the woman had had "sore eyes," according to the statement of her husband. As regards the movements of the head, the case is opposed to Ferrier. There can also be little doubt that the bullet entered *in front* of area 12, and that in its track it must have undercut the area, dividing some of the fibres passing to the basal ganglia. From the symptoms it is also apparent that the areas 5, 6, 7, 8, 9, 10 were implicated directly or indirectly. Lastly, it is worthy of note that after the patient recovered from the primary shock, and until the symptoms of inflammation came on, she was perfectly intelligent; another case proving that the frontal lobe may be injured without interfering with the intelligence of the individual.

ARTICLE III.—*Athetosis and Athetoid Movements in the Insane.* By RICHARD B. MITCHELL, M.B., Fife and Kinross Asylum.

UNDER the above title there have been collected a few clinical notes of two cases that are at present under observation.

Case I. merits the name of athetosis in so far as that its particular phenomena correspond closely with Dr Hammond's definition of that morbid kinesis. There is inability to retain the fingers and toes in any position in which they may be placed, and there is almost continual motion of them, except during *deep* sleep, when they cease altogether for the time. The disease is here associated with epilepsy, as commonly happens, and the case is one of "secondary" and "double" athetosis. The movements vary in intensity considerably on different days, and are generally most marked after the fits.

In Case II. there are grotesque movements of the fingers, and also inability to retain them in a fixed position; but their movements are not continuous.

Case I.—John T., æt. 25.

History very meagre. No hereditary predisposition to insanity or any neurosis is known to exist.

Patient is a congenital epileptic, but insanity (shown by dementia, with intercurrent attacks of mania) only became developed since puberty. He is of the strumous diathesis, and has, moreover, the bloated physiognomy of a confirmed epileptic. Muscularity deficient. Temperature normal. The thoracic and abdominal viscera are healthy.

Nervous System.—There is a considerable degree of analgesia generally. Taste and smell very much blunted. Testing of the other sensory functions does not give reliable results, owing to the patient's very demented state. Plantar skin-reflex normal. Patellar tendon-reflex considerably diminished. Farado-contractility of the muscles normal. Voluntary movements are very feeble. The epileptic fits sometimes happen three or four times daily, and are very severe.

During the whole day movements are almost constantly present in the fingers and toes on both sides of the body.

Sometimes one digit, perhaps the middle finger, remains applied tip to tip with the thumb for a second, while all the others are slowly flexing or extending individually, or being abducted or adducted in turns. Sometimes the fingers are all in rotation applied to the thumb, beginning with the little finger, as if he were rolling some object between their tips. If the fingers are passively extended, the instant the force is removed they become more or less flexed and resume their gliding movements. As a rule, he is quite unable to perform any manual operation requiring the greater degrees of co-ordinating power.

The movements of the toes can best be seen when the patient is seated in the ordinary position. The toes of one foot (say the left) become slowly dorsiflexed, and then the whole foot also; after a few seconds the toes are slowly lowered to the floor, and the same process is gone through in the other foot, while the first is at rest. After a pause of some seconds the left foot begins again, and so on. The same movements occur, though in a less degree, when he stands upright. He is quite speechless, being able merely to stammer out a short series of inarticulate sounds, the last of which is sharply accentuated.

Case II.—Robert R., æt. 33.

History.—There appears to be no hereditary predisposition to insanity, but his mother is of intemperate habits. Two months before R. was born she received a severe fright and shock in consequence of being capsized while travelling in an omnibus, which collided with some other conveyance. Patient has been imbecile from birth. His mother says that he never of his own accord tried to take hold of objects, as other young infants usually do, but that if (*e.g.*) a teaspoon were offered him, he would try to seize it, but would only succeed after many efforts, his hand and arm jumping wildly about, and the fingers making disorderly movements all the time. When he had a hold of it he could not let go again. (This condition has remained with him constantly till the present time.) No jerkings of the limbs had ever been noticed apart from voluntary movement.

Very severe "convulsive fits," accompanied by high fever and loss of power in the limbs, came on at the age of seven months, and occurred frequently till he was ten months old. There was apparently no loss of control over the sphincters during this period. After this it was noticed that his legs did not grow like the rest of his body, and the feet became fixed. He was never able to walk or stand, or to do anything for himself.

At the present time there is seen to be deficient development and atrophy of the muscles of the legs, especially the dorsiflexors of the feet, and the tibiæ, are very much shorter than normal. Each great toe is firmly and permanently bent beneath the sole of the foot. The only movements permissible below the knees, even on passive motion, are those of slight inversion and eversion of the feet, these being firmly fixed in the flexed position. The head is symmetrical, and is 20 inches in circumference at a line between the occipital protuberance and half an inch above the orbit. Palate not much arched. Thoracic and abdominal organs healthy. Pulse 85, regular and full. Temperature in axilla 98°·6, and in the popliteal spaces 96°·0.

Nervous System.—Tactile sensibility is slightly blunted all over the body. Sensibility to pain, tickling, and temperature normal. Taste and smell acute. Muscular sense normal. No pains anywhere. No nystagmus. Patellar tendon-reflex very much diminished. Plantar skin-reflex exaggerated. Tongue protruded normally, and is straight and steady. Mastication is performed in a spasmodic, clumsy manner. Farado-contractility of the muscles of the upper limbs slightly impaired, but in the legs it is much diminished.

There is extreme want of co-ordination in the limbs. The arms are fairly developed, and there is no atrophy of any of the muscles.

The hands usually lie by his side (the forearms pronated and the elbows abducted), the thumb, with the index finger over it, flexed on the palm. The other digits remain in different degrees of partial flexion at the metacarpo-phalangeal joints, and extension at the inter-phalangeal joints; or he sits with the hands nearly open by keeping the fingers pressed against the thigh.

Voluntary manual movement displays the extreme ataxy of the muscles in the member set in motion, and is accompanied by riotous disorder in the opposite arm and the lower limbs.

On being asked to extend the fingers, he obeys with great difficulty. They partially extend, then are abducted and adducted and flex again several times before he finally succeeds in attaining his object. Often he pulls them open by aid of the other hand in his desperate efforts.

When the hand is open as far as he can get it, all the fingers are seen to be flexed, extended, abducted, and adducted in an irregular manner, slowly, and in limited degrees. When placed in a different position by passive force they cannot retain their new relations to each other after the force is removed, but instantly resume their grotesque attitudes. The appearance of the hand when thus extended bears a close resemblance to that shown in Fig. 25, p. 321, of Dr Hammond's book. The extensors get rapidly fatigued, and he is glad to close the hand again.

If he is asked to touch the top of his head, he clumsily jerks his left arm into supination and abduction, and after performing a series of irregularly festooned spasmodic movements with it, he finally dashes his contorted fingers over his hair. *He has much greater difficulty in obeying when his eyes are shut.* In trying to do the same thing with the right hand, he fails through the extreme ataxy of the muscles. Grasp of left hand stronger than right.

In trying to grasp a light object, the hand moves spasmodically towards it; he then grabs at it, fumbles wildly with it, and finally clutches it desperately with the three outer fingers (the thumb and forefinger remaining fully extended), to retain involuntarily a firm hold of it.

When one quickly flexes the forearm on the upper arm by force, a momentary check to the action is always felt, which is not due to voluntary resistance on the part of the patient, and which is not experienced when one performs the same operation on a healthy person.

The facial expression is intelligent. Speech is very rudimentary, jerky and abrupt; the only articulate utterances are "Ay" and "No." His power of pantomime is well developed, and he makes most of his wants known thereby.

In both the above cases the movements occur independently of the will, although apparently they can be controlled by it to some extent. They are in J. T. of a tonic, slow, and quasi-purposive character, and differ from those often seen after the fits in cases of epileptic dementia.

In Case II. the "fits" were apparently one symptom of an attack of infantile paralysis, which has told more severely on the lower extremities. The disorderly movements of the limbs on voluntary motion do not correspond at all with either chorea or multiple sclerosis, and seem to be due to a disorder in the normal state of antagonistic tonicity in the muscles themselves. The patient eats and sleeps very well indeed. He complains of nothing, and is always in excellent spirits.

ARTICLE IV.—*A Case of Successful Sponge-Grafting.* By NORMAN PORRITT, L.R.C.P. Lond., M.R.C.S. Eng.; late House Surgeon, Infirmary, Huddersfield.

BY the kind permission of Mr Rhodes, surgeon to this Infirmary, under whose care the case here related was placed, I am able to publish the following notes. The interesting and original paper by Dr Hamilton which appeared in the *Edinburgh Medical Journal* for December will be fresh in the memories of your readers, and it is therefore necessary to relate only the clinical notes of the case, and to refer your readers for explanatory details of the process of sponge-grafting to Dr Hamilton's thesis.

The patient, James Rushworth, 14 years of age, residing at Dalton, and employed in one of the mills as a "firer," was coming down three or four steps, at the bottom of which was a rapidly-revolving drum. In doing so he slipped, and fell with the right cheek upon the edge of the drum. The accident occurred on 7th November 1881, and on admission to hospital immediately after it I found a pale, somewhat anæmic boy, extending obliquely across whose right cheek was an oval charred cavity four inches long and two inches in the greatest breadth, whence the margins converged to a point at each extremity. It had exactly the appearance of a burn, the result, no doubt, of the friction which occurred during its production. Poultices were applied, for which, as the slough began to detach itself, carbolic oil was substituted.

21*st November*.—There is now a rather pale granulating cavity, one-third of an inch deep in the centre, of the shape and size above mentioned. Into this cavity a slice of sponge, prepared according to Dr Hamilton's directions, was placed so as to fit it accurately and fill it completely, but without rising above the level of the surrounding skin. A piece of dextrin or protective silk was laid over the sponge, and the whole held in position by strips of plaister. Two thicknesses of boracic lint, some wadding, and a bandage completed the dressing.

22*nd*.—The dressings were changed at 11 P.M., as discharge was oozing through them. The sponge is firmly fixed, and covered with odourless purulent fluid, whilst its edges are yellowish-white.

28*th*.—The dressings are changed and the wound irrigated daily. The surface of the sponge is black, and on gently pulling the lower part of it the side of the wound is dragged with it. The lower extremity appears incorporated with the granulations visible at the margin. The sponge is soaked in thin purulent discharge.

11*th December.*—There are no indications of granulations pushing through the sponge, which now adheres very firmly. With the scissors a thin slice was taken from the surface, which caused blood to issue from the sponge beneath, and the portion then exposed was of a general faint pink colour, no granulations, however, being visible.

21*st.*—The sponge, since the last note, has been dragged more deeply into the wound cavity, and the pink hue is much more pronounced. One small pouting granulation protrudes through the upper portion of the sponge, and the discharge is much more abundant and more creamy.

26*th.*—Many more tufts of granulations now show upon the surface, upon which the sponge tissue is not apparent to the eye, but can be detected by pulling at the surface with the forceps, when fragments of sponge are brought away. The whole has a much more intense red appearance.

9*th January.*—The whole of the sponge structure, with the exception of very small particles, has disappeared, and a mass of healthy-looking granulations, at the lower angle of which cicatrization has commenced, occupies the place of the sponge. The mass is the same size as the sponge, and projects above the surface of surrounding tissues.

13*th.*—The patient dismissed. The wound is now three-fourths of an inch long and one-fourth of an inch broad, and is healthy and granulating. Cicatrization is proceeding very rapidly indeed.

I wish to add, that I had valuable assistance from Dr Cameron, Physician to the Infirmary, in the preparation of the sponge and in placing it in its new position on the patient's face.

ARTICLE V.—*Points of Resemblance between Typhoid Fever and Diphtheria.* By ANDREW KEY, M.D., Montrose.

(*Read before the Forfarshire Medical Association*, 14*th July* 1881.)

FOR many years I have been convinced that there is a close connexion in some respects between these two diseases. I shall state my case most clearly and succinctly by referring at once to notes of various outbreaks of diphtheria which have occurred in my practice, and which I think go far to establish my views.

During the summer of 1873 we had a sharp epidemic of diphtheria in Montrose and the surrounding district. In the beginning of July of that year I was asked to visit the child of a farmer. I found her suffering from diphtheria. It proved to be of a very malignant type. Six children and two maid-servants were attacked, and it proved fatal in the cases of three children and one of the maid-servants.

The farm-house was built in a most salubrious situation, standing on a rising ground facing the sea. The farmer was a most intelligent, well-educated man, fully alive to the necessity of attending to and obeying sanitary laws. On my first visit I told him that there must be something at fault with his water-supply or drainage, some grave insanitary condition. I was told that this was not so, as he had particularly attended to all these things. The water used in the house was got from a well near the sea, and he had been at the trouble to get it analyzed by a practical chemist in Edinburgh, who had pronounced it to be pure and free from all organic matter, and fit for domestic use. I went over all the place, and could find nothing to confirm my suspicions. There was no W.C. in the house. A convenience was placed at the foot of the garden, and it was very sweet and clean. And yet, notwithstanding all this care, during a twenty years' occupation of the farm there had been seven outbreaks of typhoid fever—three in the farm-house and four in the families of his ploughmen.

There was a pond close to the house, containing a supply of water used for driving the threshing-mill. One day, when visiting, I found this pond dry, and the smell from it was decidedly offensive.

Making inquiry, I was told that its supply of water was derived from a small stream which came down past a mansion-house half a mile distant, and that the whole drainage from this mansion-house, including several water-closets, passed into this stream, and so was intended to be carried to the sea; but a dyke was thrown across it, and a pipe there put in for diverting part of the water to this pond. I went up and examined the stream at this dyke. Being in the middle of summer, there was a small supply of water, so much so that the whole of it was finding its way into the pipe, and all the drainage of the mansion-house was conveyed into the pond. Further, I found that a connexion was laid on from this pond to the kitchen of the farm-house, and that the water was used for washing kitchen utensils, etc.; but the servants were strictly enjoined not to use it on any account for cooking or drinking. The well supplying the pure water was at a distance from the house, the pipe from the pond was very convenient, and the cook admitted that she often used it for making soup, etc., when the proper supply was done. The farm-servants used the water from this pond habitually, as it was so near.

When this outbreak of diphtheria occurred there was no sickness of any kind in the mansion-house. I suppose no one will deny that the different outbreaks of typhoid fever were due to the use of this impure water, and I have no doubt the outbreak of diphtheria was caused in the same way. Dr Johnston of Kair saw this family in consultation, and he agreed with me as to the cause of the mischief. It must be remembered that at this time—in 1873—diphtheria was rife in the town and neighbourhood,—not typhoid fever,—and I am of opinion that the same insanitary conditions which at one time produce typhoid do at another time produce diphtheria. I do not think it has been proved that there is one poison producing typhoid, and typhoid only.

In March 1874, the epidemic of diphtheria not having yet exhausted itself, I was called to see two children aged two and four respectively. Their father was a labourer, and they lived in one room in a rather unhealthy part of the town. It was diphtheria of a malignant form. One of them died, and the other had a sharp struggle for life, but ultimately recovered. I had only been attending in this family for three days when I was asked to see a child, a girl of seven, living in the same house, but in a flat above. This ultimately proved to be a severe and most characteristic attack of typhoid fever. So we have here, in one house, diphtheria and typhoid going on together. This little girl was very lame, and had scarcely been to school, rarely out of the house, and my two diphtheritic patients were never away from home. Is it too much to assume that it was the same poison which produced the two distinct diseases? If I am right in my hypothesis, it will require further investigation to show why at one time the same insanitary condition causes diphtheria and at another typhoid, and I confess that I can throw no light on the subject.

I will now go back to the year 1860, when I was in practice in Arbroath, a town not then properly drained, and which was almost never free from typhoid and frequently scourged by diphtheria. I think it will be found that typhoid and diphtheria have a liking for the same localities. In this year, 1860, diphtheria was very fatal in Arbroath. It broke out in a gentleman's family living in a newly-built house in one of the healthiest suburbs of the town. The gentleman was fully alive to the advantage of good drainage, good water-supply, and sound sanitary conditions. All his family of three healthy children died in ten days. I pointed out to him that I believed thoroughly that diphtheria arose from insanitary neglect of some kind. His house was built under his own supervision, and, without entering into particulars, I will just say that we were fairly baffled to find any cause for the outbreak. Years after, when on a visit to me in Montrose, this gentleman said, "I now know why my children had diphtheria;" and this was his story. The ordinary water-supply for domestic purposes was very hard, although pure, and was almost unfit for use in making tea, soup, etc. His house being out of town, and slated with Welsh slates, he had a stone cistern built to receive the rain-water. This cistern he covered carefully with stone flags, and before using the water he had it twice filtered. But he had made one grand mistake. The overflow-pipe of the cistern was connected with the drains, and was *not* trapped. The gases from these sewage-pipes came up into this cistern and impregnated the water. I think if the history of this cistern had been told to a number of medical men, they would most likely have unanimously agreed that the disease produced, and which proved so fatal, would be typhoid; and yet it was diphtheria, certainly arising from a cause most generally productive of typhoid.

Once more, in May 1874 I was called one evening to see a very healthy married lady, aged 30. On examination I found a suspicious appearance of the throat, but I could not positively decide that it was diphtheria. Next morning (Sunday) there was no longer any doubt. I told her husband that he should send all the children away at once from the house and the source of the mischief, whatever that might be; but on examining them I found the youngest, a boy of two, already ill. A nurse and the other three children were sent off by rail in the afternoon to some friends at a distance. This lady died; the child was very ill, but although I gave a most unfavourable prognosis, he recovered. The medical attendant of the family to whose care the other children were entrusted visited them daily. As already stated, they left home on a Sunday, and remained quite well all that week. But on the Tuesday following the youngest girl, aged four, was down in diphtheria, and was dead in a week. There were no other cases. This family lived in a very badly drained house. Most of the houses in this part of Montrose had then cesspools attached to them. The servants had often complained of offensive smells in the kitchen, and of being sick and suffering from diarrhœa, and it was resolved, just before this outbreak of diphtheria, to have an investigation made. The result was the discovery of a cesspool in the court, within a few yards of the kitchen, and connected with the sink. This was emptied for the first time for at least twenty-five years, its existence not being even suspected, as it was thought that the house was drained into the estuary of the South Esk. Unfortunately, the contents of this cesspool were conveyed to an ash-pit at the foot of the garden. I must state again that the mother and the two youngest children were the only cases of diphtheria. The father, two eldest children, and the three servants escaped. Why was it so? The lady had poultry, of which she was very fond, in a house close to the ashpit, full of the contents of the cesspool. She used to go there often with her two youngest children, lingering about the poultry-house; but the ashpit was so offensive that at the end of a week she complained so much to her husband that he had it emptied, unfortunately when too late. I think there can be little doubt as to the origin of the poison here. The three persons most exposed, or alone exposed, to its influence had diphtheria; and if, instead, they had suffered from typhoid fever, it would have been considered quite a natural sequence. One other point in connexion with this family is of importance. The case of the little girl proves that diphtheria may have a period of ten days' incubation. She was examined carefully every day, so that the first symptoms were at once discovered. So much for the origin of the two diseases.

One other point of resemblance lies in this, that the two diseases are essentially confined to childhood and the prime of life. I have seen one case of typhoid fever where I could make a perfectly accurate diagnosis beyond the age of fifty-two, and I have only seen one such case; my oldest diphtheritic patient was forty-five. Very likely my experience is different from that of other observers; but I have seen a great deal both of typhoid and diphtheria, and my attention has been very closely directed to both diseases.

Again, my experience has convinced me that diphtheria, like typhoid fever, is most fatal in the middle and upper classes of society. I dread it most when it shows itself among my better-class patients; and I have seen the most unlooked-for recoveries. The very worst cases do well when occurring amongst the labouring population.

Is there any analogy between the exudation in typhoid fever in Peyer's glands and that on the fauces and larynx in diphtheria?

And now I come to the last point of resemblance between the two diseases which I shall touch upon to-day. I believe that neither are infectious in the same sense as scarlatina and smallpox are, or if they are, that they are feebly so. I know that I am very far from being orthodox in this opinion, but I find that many practitioners are gradually coming round to it. I think this is now almost the general belief as regards typhoid fever. Not long ago I met a medical friend, and our talk drifted diphtheriawards. He had just been sadly worried by an outbreak in his practice (and he was a man who could worry). He heaved a sigh of relief as he said, "What a comfort it is that it is not infectious!" If my idea as to diphtheria being due to a local source of poison be correct, it slips into the same position as typhoid fever. I can only say that I have never once in my practice traced an outbreak of diphtheria to infection. I hold that if any one, through impure drinking water, infected atmosphere, or other insanitary condition, is made ill, and tangible disease produced, you may have typhoid fever, diphtheria, or simply diarrhœa, and that these diseases are produced most readily by imbibing fæcal excretions; that the origin of these diseases, in the great majority of cases, can be traced to a source of this kind, and not to infection; moreover, that these diseases have grown with the growth and developed with the development of our present water-closet system, and that by careful attention to this source of infection and the water-supply of the house you can almost certainly banish these diseases from a family.

I am sorry to think that most of us present can remember the first outbreak of diphtheria in this country, or at least the first outbreak in recent times, and the dismay of practitioners old and young, and the great variety of opinions and theories about the disease. I yet recollect perfectly the first case of typhoid fever I ever saw; it was in the wards of the Old Edinburgh Infirmary, in the winter session of 1854–5, and, on account of the rarity of the disease, was looked upon as a godsend by the late Professor J. Hughes Bennett, and very much run after by all the clinical teachers and students. Typhoid fever was then almost unknown in Edinburgh; not so typhus. This case I refer to was imported from Bathgate, a place which (I do not know why) at that time supplied us with nearly all the cases of typhoid in the hospital.

At the same time I would not say positively that diphtheria and typhoid are *certainly* not infectious. Negative proof should not perhaps go for much, but it is worth something. Going back to the first of my cases (the farmer's family), where three children died and one maid: this maid insisted upon being taken home, and home she went, to a little hamlet half a mile from the farm-house; she was exceedingly ill, and died. There were children in the house and all about, but there was no other case of diphtheria. The little girl who was sent away on the Sunday, and was attacked by diphtheria ten days afterwards in a distant county, and died there, did not spread the disease. There was not another case in the house or neighbourhood.

In October 1874 I had a very bad case of diphtheria in a labourer's house. I do not think I ever saw a worse; it was in a young lad of 22, a factory worker. The exudation, when first seen, spread over both tonsils, the roof of the mouth, and pharynx; the smell was beyond what I had ever felt; he lived a week, much longer than I expected (but he was a labouring man), and then succumbed. My assistant and I did what we could to clean the throat and keep it sweet, disinfecting the house as thoroughly as possible; but although we visited three times a day and kept at the treatment, the stench from that throat was something wonderful. So bad was it that my assistant, after cleaning it out one night, got so sick that he had to rush out of doors and part with his supper. Well, this lad lay in the kitchen, and there was only another room in the house. There was a large family. One of them nursed the invalid; the others had to sleep in the house, part of them in his room and part in the other, all sleeping in this polluted and what many would call infectious atmosphere, living also part of the day in it. There was not another case in the family. The obvious deduction is that he imbibed the fatal poison elsewhere than at his house, and kept it to himself.

I have told the story of three fatal cases of diphtheria, likely—nay, most likely—to prove centres of infection, and all failing in being so. Take three cases of malignant small-pox, scarlatina, or typhus, and set them down as these three cases were, and would not the medical attendant tremble for the result?

I have no hesitation in sending home, if so desired, a case of typhoid fever or diphtheria, giving careful injunctions about the disposal of the excreta, feeling pretty sure that the diseases will not spread in the family.

ARTICLE VI.—*Report on the Treatment of Sixty Cases of Vesical Calculus.* By M. P. K. VARTAN, L.R.C.S.E., Medical Missionary at Nazareth.

I HAVE performed the operation in 45 cases, young and old, their ages ranging from three up to eighty years—4 in patients between sixty and eighty; 7 between forty and sixty; 12 between twenty and forty; and 22 between three and twenty. In these are included the case of a girl of about fifteen, in whom the urethra was dilated; of another of about three, from whom the stone was extracted by supra-pubic operation; also the case of a young man whose urethra was cut into for a stone measuring 10 × 7 × 5 lines.

As to the size of the calculi—

4	measured about	$3 \times 2 \times 1\frac{2}{3}$	inches.
3	„ „	$2\frac{1}{3} \times 1\frac{2}{3} \times 1\frac{1}{3}$	„
7	„ „	$1\frac{5}{6} \times 1\frac{2}{6} \times 1\frac{1}{6}$	„
15	„ „	$1\frac{3}{6} \times 1\frac{1}{6} \times 1$	„

All the rest being below an inch in the shortest diameter.

As to the nature, the great majority were phosphatic, a few lithic, and only one good specimen of mulberry-form. The size was not always proportional to the age of the patients. Sometimes I extracted comparatively small stones from old patients; on the other hand, from young patients I extracted proportionally very large ones. Thus from a boy seven years old I extracted a stone measuring $2\frac{1}{3}$ inches long and $1\frac{1}{2}$ inch broad and thick, or $4\frac{1}{2}$ inches in the circumference, irregularly tapering at each end. From a young man of a little above twenty I extracted three stones at once, each measuring, with only very slight differences, $1\frac{5}{6} \times 1\frac{2}{6} \times 1\frac{1}{6}$ inch.

As to the mode, I have performed the median operation in all, except in an old man, the lateral, my first case. In the extraction of the larger stones I combined the median and bilateral of Civiale. With the exception of one case, I have not met with any amount of hæmorrhage to give me anxiety or trouble. The hæmorrhage in this case was rather profuse, but was at the same time commandable, and in the end the patient did not seem to have been any worse for it.

As to the result, I am sorry to say five of the above forty-five cases ended in death, but all the rest in good recovery. However, three were in those of between sixty and eighty, whose state of health should have prevented me from undertaking the operation, yet their sufferings and importunities overcame my moral courage. The fourth was in a young man of about thirty, in whose case, unfortunately, the bladder was missed in the act of dilating the wound; and instead of dilating it, the loose cellular tissue in the recto-vesical space was separated, and thus he was exposed to the fatal consequence of infiltration. I discovered the mistake, and was enabled to extract a large stone, but after the irreparable mischief was done. The fifth was in a boy of seven. The stone I extracted from him was the largest proportionally to his age, the measurement of which is given above; and although the operation was performed as well as could be done, and with as little violence to the part as possible, yet the patient died from acute peritonitis on the sixth day. But this patient was left to the care of his relatives after the operation, not being able to give him hospital accommodation at the time, and the imperfect resources and nursing of the relatives, I fear, had greatly contributed to, if not altogether brought on, the fatal result in this case.

In my earlier operations I have invariably kept a drainage-tube in the wound for about two days; but the tube being spoiled and unusable, I was obliged to leave a subsequent case without it. No infiltration took place, and the wound in this case did heal sooner, in spite of this want. This circumstance encouraged me to let the wound want the tube in other cases. It is now about five cases in which I have not used the tube. All did well, and the wounds closed sooner; and in my last case, in a boy of six, from whom the stone I extracted measured $1\frac{5}{6} \times 1\frac{2}{6} \times 1$ inch, the wound contracted and the urine returned into the natural channel on the third day. On the fifth day there appeared a little oozing; but this did not continue long, and the wound quite healed on the tenth day. With the exception of keeping the patient clean and quiet, nothing extra was done in his case.

From the foregoing account it may be gathered that the median operation, when necessary, combined with the bilateral, is commendable, and the drainage-tube can be advantageously dispensed with, at least in well-performed operations. Moreover, should the pelvic fascia or the recto-vesical space meet with any violence during the operation, I fear the tube is of little or no service at all. This cannot be said, of course, respecting hæmorrhage, in which it is most useful.

I may mention, in conclusion, that besides the above I have extracted about fifteen small stones from the urethra without cutting. The springs in this neighbourhood run through chiefly calcareous rocks. This circumstance must, I believe, contribute to the prevalence of the disease in those predisposed to it.

ARTICLE VII.—*Report of Cases treated at the Ear Dispensary,* 6 *Cambridge Street, Lothian Road, from July* 1880 *to End of June* 1881. Surgeon, J. J. KIRK DUNCANSON, M.D., C.M., F.R.C.P., F.R.S.E. Reported by Mr JOHN F. THOMSON.

SUBJOINED is a list of the various diseases of the ear treated at the Ear Dispensary, 6 Cambridge Street, Lothian Road, from 1st of July 1880 to 30th of June 1881. The number of patients attending the Dispensary this year shows a considerable increase upon those of any former year, and from the length of time it is necessary to devote to the successful treatment of each case, no doubt the classification may be still very imperfect. We have endeavoured, however, to make the list as comprehensive and as intelligible as possible, trusting that it may in a measure indicate the amount of work done by the institution, and the appreciation in which it is held. Appended is a table of the ages of the patients, arranged decennially, so far as recorded. The full number (upwards of 500) does not come out from this table, owing to the ages of some of the patients not having been noted. When it is considered that many of the patients make several visits to the Dispensary—one patient told us the other day he had been at least once a week for the last four years—one can estimate more fairly the amount of work required for the proper treatment of diseases of the ear. A greater number of students took advantage of the clinical instruction given during the year, whilst many practitioners visiting our Medical School have attended for a month or two. The more serious cases have been visited and treated at their own homes or lodgings, and medicines, etc., are supplied gratuitously to such patients as are really unable to procure them for themselves.

DISEASES OF THE EXTERNAL EAR.

Intertrigo auris,	1
Nævus of auricle,	1
Abscess of mastoid process (idiopathic),	2
Eczema,	7
Periostitis of mastoid process,	1
Cystic tumour of auricle,	2
Old cicatrix over mastoid process,	2
Phlegmon of auricle,	1
Cleft lobe—coloboma auris, 1; traumatic, 1,	2
Acute inflammation of lobule,	1
Microtia (imperfect development of auricle),	1
Fistula auris congenita,	1
Adenitis,	7

DISEASES OF THE NASO-PHARYNX.

Ozæna,	6
Naso-pharyngitis (congestion and thickening of naso-pharyngeal mucous membrane),	4
Acute pharyngitis,	4
Chronic do.,	30
Ulcerative do.,	3
Polypus of nostril,	1
Chronic nasal catarrh,	45

DISEASES OF THE EXTERNAL AUDITORY MEATUS.

Eczema,	16
Foreign bodies (peas, beads, seeds, cotton-wool, etc.),	9

Furuncular abscess (otitis externa circumscripta), occurred chiefly in spring of 1881,	17
Diffuse inflammation (otitis externa diffusa),	13
Wax (ceruminosis obturans),	214
Laminated epithelial plug (keratosis obturans),	9
Destruction of membrana tympani from ulceration caused by instillation of acrid drops, injuries from foreign bodies, etc.,	5
Exostosis, one pedunculated,	2
Hyperostosis of bony external auditory meatus,	6
Effusion of blood into do. do.,	1

DISEASES OF THE MIDDLE EAR.

Acute catarrhal inflammation (otitis media catarrhalis acuta),	7
Subacute catarrhal inflammation (otitis media catarrhalis subacuta), occurring in young growing children,	62
Chronic catarrhal inflammation (otitis media catarrhalis chronica),	184
Cicatrix of membrana tympani,	14
Acute myringitis,	1
Chronic do.,	2
Dry perforation of membrana tympani,	21
Acute suppurative inflammation with perforation (otitis media suppurativa),	2
Chronic suppurative inflammation with perforation (otitis media hypertrophica),	137
Polypus,	21
Calcareous deposits in membrana tympani,	4
Suppurative inflammation with necrosis,	3
Closure, temporary, arising from condition of pharyngeal mucous membrane of the faucial opening of Eustachian tube,	3
Tinnitus aurium,	18
Syphilitic disease,	5
Otitis media cum myringitis chronica, occurring in gouty rheumatic patients,	2
Otalgia,	3

DISEASES OF THE INTERNAL EAR.

Deaf-mutism, congenital,	2
Disease of the labyrinth, cause uncertain,	1
Syphilitic disease of the labyrinth—hereditary, 4; acquired, 1,	5
Deafness from disease after having learned to speak, brought on by neglected ear disease from scarlet fever, measles, etc.,	3
Disease of labyrinth, with Menière's symptoms,	2

Of the patients there were under 1 year,	3
Do. from 1–10 years,	60

Of the patients there were	from	11–20 years,	107
Do.	„	21–30 „	111
Do.	„	31–40 „	67
Do.	„	41–50 „	61
Do.	„	51–60 „	41
Do.	„	61–70 „	18
Do.	„	71–80 „	7

ARTICLE VIII.—*Case illustrating the Importance of Accurate Pelvimetry; with Description of a New Method.* By WILLIAM TURNER, M.A., M.D., Civil Hospital, Gibraltar.

(*Read before the Edinburgh Obstetrical Society, 25th January* 1882.)

THE history of the following case is intended, first, to illustrate the importance in obstetric practice of obtaining an accurate internal measurement of the capacity of the pelvic brim in the higher degrees of its deformity; secondly, to direct attention to the imperfect nature of the means of making such measurement at present employed by obstetricians; and thirdly, to afford an opportunity of bringing under your notice a method of measuring the true conjugate diameter of the pelvis *directly*, a method which suggested itself to me in contemplating the issue of the case to be detailed, and which I venture to think will prove a useful accessory to the other methods at present employed for such purpose. Some other points in the case, of minor interest, will also be noticed *en passant.*

Mrs D., aged 23 years, in her second pregnancy, was admitted to the Maternity Hospital, Glasgow, on 12th May 1881. The patient stated, on admission, that she had been taken in labour about six hours previously, and that the waters had escaped during one of her earliest pains. It was ascertained, with regard to her former labour, that it had lasted for three days, and had been completed with the greatest difficulty by natural efforts. The vertex had presented, and an eighth month child had been born dead.

From the patient's appearance on examination, as well as from her own statements, it was evident that in her early life she had been the subject of well-marked rickets, as well as of a strumous diathesis. She could not walk till she was eight years of age; and having been much in the habit of crawling on her hands and knees, she had her right arm bent near the wrist. The patient was a slender woman, 5 feet 3 inches in height, was pigeon-breasted, and had pinched features, the bimalar diameter of the face measuring barely 4 inches. The external conjugate diameter of the pelvis measured $6\frac{3}{4}$ inches; the distance between the anterior superior spines of the ilia was 11 inches; between the iliac crests also 11 inches.

On examination of the abdomen, the uterine tumour was seen to be symmetrically placed and unusually elongated. The fœtal head was readily defined, situated over the inlet to the pelvis, overhanging to a slight extent the edge of the pubis in front. On making vaginal examination, the ease with which the finger could reach and define the bodies of the sacral vertebræ was the first thing to be remarked. The presenting part was reached with difficulty through a flaccid, fairly dilated os uteri. The head was felt to be freely movable above the pelvic brim, the sagittal suture lying directly in the transverse diameter of the pelvis. The greater fontanelle constituted the most accessible part of the head.

From the serious nature of her general symptoms, the patient being in great suffering, and the progress of the head being evidently arrested, a consultation of the hospital staff was held without delay, at which five of its members were able to be present. The patient was put under chloroform, and each of those members present made a careful estimate, by examination, of the internal conjugate diameter of the pelvis. The general opinion was that we had to deal with a true conjugate of 3¼ inches, and that, considering there was a good amount of space at either side, it being clearly a pelvis of the flat variety, and keeping in view, also, the history of the previous labour, version offered a fair prospect of saving the child. This operation was accordingly set about, and there being plenty of assistance at hand, nothing was wanting in the arrangements to insure the success of our undertaking.

The patient was placed in the lithotomy position, and her bladder was emptied by catheter. Version was performed with ease, and all went smoothly until the head came to engage in the pelvis, which it did in a transverse position. For about eight minutes, with brief intervals, powerful traction on the child's body, associated with vigorous abdominal propulsion, was persisted in without apparently gaining any ground. When, at length, in effecting the pendulum movement, the operator carried the body of the child much further forward on the pubis than previously, the head speedily and suddenly slid through the brim and was born.

The child showed very faint signs of vitality after it was born, and respiration was never fully established. The size of its head was considerably above the average, as was shown by measurements made at the time. A plaster-cast of it, taken some hours after birth, and which I beg to submit for your inspection, gives a fair idea of the nature, though not of the degree, of distortion to which the head had been subjected in the process of its delivery. The vault of the cranium as a whole was elongated, flattened, and thrust to the left side, the side which lay anteriorly in the pelvis. The right parietal bone was driven inwards and bevelled off towards its summit, but was not indented, an impression being conveyed that the anterior parietal must have taken the lead of the posterior to a considerable degree during the descent. The portion of the scalp covering the posterior parietal bone was much congested, but there was no abrasion on any part of it, nor fracture of the cranial bones.

With the view of ascertaining what lesions, if any, had occurred in the neck or head of the child from the necessarily harsh treatment to which it had been subjected, a careful dissection of these parts was made for me by the late Dr David Foulis, then pathologist to the hospital. No injury to the soft parts of the neck was discovered, but extravasated blood was found forming a thin layer outside the theca spinalis, extending from the medulla oblongata downwards for about an inch. The ligaments and vertebræ appeared to be uninjured. There was no effused blood to be seen inside the theca spinalis, nor was there any laceration of the spinal cord. The brain and medulla showed no traces of injury to the naked eye. Small punctiform extravasations of blood were seen on the left side of the under surface of the pons varolii.

The subsequent history of the mother was very briefly as follows:—Twelve hours after the operation she complained of slight tenderness over the uterus; six hours later she was crying out from severe abdominal pain. The integument covering the lower fourth of the abdomen had assumed a smoky brown, congested appearance, which was marked off by an ill-defined line from the paler skin above. The pain was readily allayed by treatment; and until the evening of the seventh day the patient's symptoms were such that her ultimate recovery appeared highly probable. Severe vomiting, however, accompanied by delirium and intense abdominal pain, then set in quite unexpectedly, and it was evident that a fresh attack of peritonitis had supervened. The brown, congested appearance of the skin of the abdomen was found to have extended to the level of the umbilicus, and the whole abdomen was considerably distended. In spite of our best efforts to rally her, death took place on the following (the eighth) day, preceded by two severe convulsive attacks.

The following are the points of more immediate interest that were brought to light at the post-mortem examination:—The *peritoneum* was everywhere covered by a thin layer of soft, recent, yellow lymph, which matted together coils of intestine. This layer of lymph was found everywhere throughout the peritoneal cavity, even on the surface of the liver and spleen. The *uterus* extended half-way to the umbilicus. A considerable amount of soft, purulent lymph was found lying around the cervix within the peritoneum. The appearance presented by the lining of the body of the uterus bore a marked contrast to that of the lining of the cervix. The former was smooth and white, with a coating of grumous red fluid; the latter had a dark purple, congested appearance. The anterior part of the cervix was torn vertically in two places. The fissure on the right extended to within a quarter of an inch of the os internum, and exposed the pericervical connective tissue as a gray, sloughing, and granulating surface. The fissure on the left extended half-way up the cervix, and did not divide the tissues so deeply. The edges of these fissures were rounded and partly healed over. There was nowhere to be seen any pus in the walls of the uterus nor in the connective tissue around the pelvic basement. The urinary bladder was contracted, and its lining membrane was in places very slightly injected. There was no congestion of the mucous membrane of the rectum, nor any injury to its walls or the tissues surrounding it. The internal measurements of the pelvic brim were found to be—true conjugate, 2½ inches; transverse, 5¾ inches.

Such being the facts of the case, I think there can be no dispute that, with the data before us at the consultation, the operation chosen and performed was the one likely to yield the best results. There was certain information that the deformity of the pelvis was of the flat variety, and, moreover, careful measurements, both external and internal, repeatedly made, all pointed to the conclusion that the space available did not preclude the hope of saving the child without increasing the risk to the mother beyond that inherent in any alternative operation. Had the exact measurement of the true conjugate diameter been known, any idea of attempting to save the child's life would have been abandoned as useless, unless abdominal section had been meditated, and in all probability the operation of craniotomy would have been the one chosen. But our estimate of the conjugate, upon which the success of the case entirely depended, differed from the actual conjugate diameter by three-quarters of an inch.

The magnitude of such a mistake, especially in relation to this particular measurement, will be appreciated by any experienced accoucheur. It may be very naturally asked, How could such a flagrant error have been committed by so many independent observers? Most obstetricians, I think, are willing to rely upon information obtained from the use of the index finger as an internal pelvimeter, at least as much as, or more so than on that gained by any mechanical contrivance hitherto devised. By its means the diagonal or lower conjugate diameter is determined, *i.e.*, the distance from the sacral promontory to the inferior border of the symphysis pubis; and from that diameter the true conjugate is *inferred* by subtracting three-quarters of an inch, half an inch, quarter of an inch—in short, it is left to the discretion of the individual to subtract whatever he chooses. It is at all events patent that the subject stands in need of revisal, and any effort to supplement or correct the data on which our choice of operation depends cannot but be worth making. Its immediate importance could hardly be better indicated than by reference to a case such as that narrated.

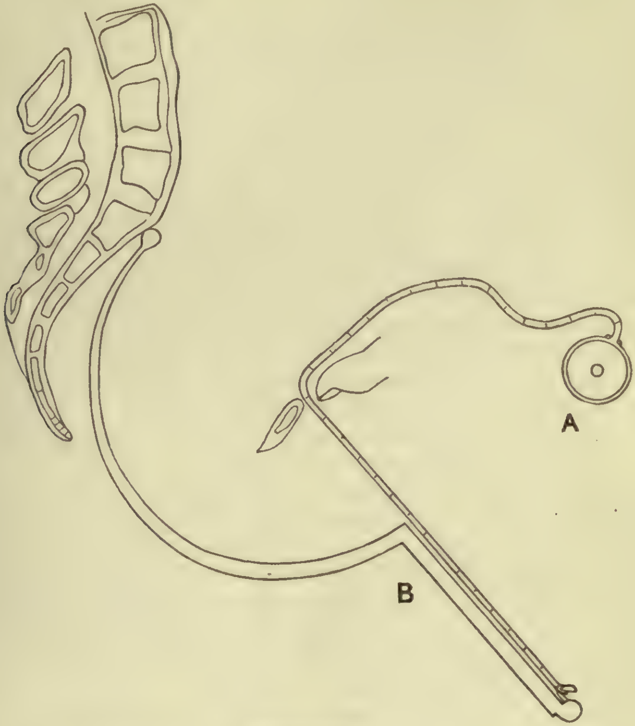
From examination of a number of prepared pelves, both normal and deformed, I have been able to satisfy myself that the relationship subsisting between the diagonal and true conjugate diameters is very far from uniform in different pelves. Even in different specimens belonging to the same variety of pelvis—*e.g.*, of flat pelvis—I have found in one specimen a difference of $\frac{3}{4}$ of an inch, while in another specimen the higher and lower diameters were as nearly as possible of equal length. This want of uniformity arises either from the fact that the sacral wedge inserted between the two iliac bones has been driven further home in one case than in another, when the bones were in a pliable condition, so that the sacrum, and consequently the sacral promontory, has come to occupy a lower plane than usual with relation to the rest of the pelvis; or it is due to the circumstance that the symphysis has, under the same morbid condition, been so twisted upon itself that its normal inclination has become greatly altered. Moreover, the combined influence of these two factors may have been operative on the same case.

All this points to the advisability of our possessing, if possible, some means of measuring the conjugate *directly*, rather than leaving it a matter of inference. It occurred to me to employ the following method, which, after extended trial, I have found to be of good service, both from its own results and also as supplying a means of checking the results obtained by the other methods. Its applicability depends upon the fact that the superior border of the symphysis pubis is a line which, except in cases where there is excessive obesity of the abdomen, can be defined with tolerable exactness.

One arm of the ordinary Baudeloque callipers is fitted at its joint with a small S-shaped wire hook, to which the ring of a measuring-tape may be attached. Chloroform having been administered to the patient, the probe point of the instrument is dipped in oil, carried by an assistant into the vagina, after the manner of using the uterine sound, and made to impinge on the promontory of the sacrum. It is better that the whole hand be introduced into the vagina, so as to maintain the point of the instrument accurately in this position. The operator himself then attaches the measuring-tape to the hook on the joint, and measures off the distance to the upper margin of the symphysis, taking care that the instrument is so inclined that the tape runs parallel with its straight shank. This measurement having been accurately noted, the instrument is withdrawn from the vagina. The distance to the probe point of the instrument is next measured off and also accurately noted. The difference between these two measurements is the true conjugate diameter of the pelvic brim.

This method of pelvimetry, which is a combination of the external and internal methods, I believe to furnish as accurate results as any that I have employed or with which I am acquainted. I have had but one opportunity of verifying its accuracy post-mortem, but I have learned to attach some importance to the evidence it has yielded me in a considerable number of cases where grave deformity existed. I have to add that some little dexterity and experience in its use are essential to a reliable result.

The accompanying diagram represents the mode of application of the pelvimeter described.



ARTICLE IX.—*Obstetrical Observations.* By Dr G. HAMILTON, Falkirk.

I GIVE the following case as an addition to those I have already published as to the management of tedious labours, in which the child's life is so often lost or placed in great jeopardy.

Mrs B., æt. 36, has had six of a family, and states that on former occasions she only required ergot. Last year she had rather obstinate ulceration of the os uteri, for which she was for a time under Professor Simpson's care. Latterly this has kept quite well.

1*st February* 1882.—Labour commenced last night at 11 P.M., and I was called at 2 A.M. Found os thin and fully dilated; membranes unruptured, and head at brim. Pains strong, but not efficient. These continuing to do no good, after a time the membranes were ruptured, but the child so high up that the presentation could not easily be made out, except that it was vertex. I waited for about an hour, and, as matters remained nearly *in statu quo*, I resolved to try if I could give some assistance with the forceps. Of course these had to be applied within the uterus, and, as is usual with me when the head is high up, I applied them where I could most readily lay hold of the head, viz., antero-posteriorly—my usual grip. In doing this I found that the pubes projected slightly inwards, but I got my hold without any difficulty. Having used traction for a short time, the head descended a little, and the handles of the forceps turned, so as now to be transverse instead of antero-posterior. Taking them off, I introduced my hand, so as to ascertain more exactly the position (for the head was still too high up to allow me to do so with the finger), and found that an ear was opposite the left sacro-sciatic notch, and the face to the pubes.

The plan which I adopted after this was to apply my first blade over the ear lying to the left side, and to let the other blade take its own place on the opposite side. This I found, from an inspection of the child after birth, was over the parietal bone. I had here a good hold of the head, though it was high up in the pelvis, and by traction principally, though I tried to use leverage from side to side, I delivered after nearly an hour's pretty hard work, the child being large and not in the least asphyxiated. Afterwards mother and child did excellently well.

Although I did not ascertain with precision the position of the head when I first examined, I have no doubt it was one of those in which an ear is found at the symphysis or slightly to the right side of it, with the face to the left side, and that when I made traction, and the handles of the forceps turned, the occiput revolved into the hollow of the sacrum.

The practical remarks that occur to me, in looking at such a case as this, are:—

1*st*, These are sometimes, though not always, difficult to manage (or *persistent* occipito-posterior cases, as they have been called), and that in the hands of a novice, or where short forceps are used, there is great risk of the child's life being lost. I began here to apply the forceps early, and it took me an hour at least of pretty hard work before I could deliver, even though I got an excellent hold of the head, and my forceps never slipped. For a case like this the forceps should be strong, and not less than 13¾ or 14 inches in length, otherwise they are certain to slip. Even with Ziegler's, which are 12½ in. long, I had, in a similar case in the early part of my practice, to perforate, being utterly unable to bring the head downwards. The indiarubber paste with which I coat the blades of my forceps also undoubtedly assisted me here, and I needed all the assistance thus given to me.

2*nd*, In this case, as I have had to remark on a former occasion, I particularly noticed that, with the forceps placed transversely in the pelvis, I had comparatively little power in using my favourite manœuvre of leverage. I could simply move the handles from side to side, and, though something was thus gained, it seemed to me, accustomed as I am to rotation round the pubes, to be quite trifling. In this respect I found that I gained most by using the leverage with the long pulls, first upwards and then downwards, to a certain extent thus imitating their use when I apply them antero-posteriorly.

Some practitioners have doubted whether much is gained by trusting to leverage power, but this I believe arises from their using the instrument transversely, or nearly so. Let any doubter try my straight forceps, applied as I do, and made to revolve round the pubes, and I can assure him he will no longer be sceptical. In fact, the power thus got appears to me to be enormous (and I have proved it also to be safe), and hence my forceps applications are usually finished, say in a quarter of an hour, instead of lasting, as in this case, for fully an hour.

On examining the child's head the day after birth, to see exactly where the forceps had been applied, I noticed that over the ear, where the first or solid blade had been fixed, no mark was to be seen, while a slight mark was left on the side of the head where the fenestrated blade had been fixed. This is important, and bears out what I have noticed in my forceps applications, that the solid or first blade never injures the skin; while formerly, when I used Ziegler's blades, both fenestrated, it was almost invariably where blade No. 1 had been applied that the skin was most marked. In my mode, and indeed in every mode, of using the forceps, this, as I have said, comes occasionally to be very important. Here, for example, I applied my first blade over an ear, which is my general rule—at first, at any rate—when an ear can be reached. In doing this, however, where the head, as in this instance, turns, so as to place the blades transversely, or where the blades are at once so placed, our leverage power, as I have said, is much lessened, and we have to depend principally upon traction, which is greatly the lesser of the two. In the *Brit. and For. Med.-Chir. Rev.* for January 1872, p. 176, I have given as an illustration of this the extraction of a spike driven into a tree, and I have said that in that case our chief power is brought into operation by going more or less *round the tree.*

I have to insist somewhat on this point, for, since the introduction of Tarnier's instrument, it seems to have been thought that the great object in resorting to the forceps is to use traction alone, and that this is quite sufficient, provided it be applied in the axis of the pelvis. To a considerable extent I hold this to be a mistake. No doubt, when they are applied at the brim, traction is almost the only power available; but the case is widely different when the case is intra-pelvic, for then the head becomes more or less impacted, and sometimes, as I have attempted to show,[1] almost "entrapped," from the shape of the pelvis and the projection of the ischial spines. In these cases mere traction, in my hands, has been of comparatively little avail. The head must be either turned or thrown backwards to get it out of the trap, and the best way to do this, I have also attempted to show, is to bring into operation the leverage power—not the small amount of it got by moving the handles of the instrument from side to side, but that obtained by boldly making the handles and head revolve round the pubes (and backwards, if necessary)—so that the handles, which were directed downwards and backwards, come to be directed, it may be, forwards and upwards.

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[1] See *Brit. and For. Med.-Chir. Rev.*, January 1872, pp. 181, 182.

In extracting the spike, surely the workman would be thought very foolish who limited his exertions to mere traction *in the axis of the hole it occupied.* No, he knows better. He uses leverage, and at once succeeds in his object. So also, depend upon it, will the accoucheur succeed when he thus deviates from exerting his power in the axis of the pelvis, or, in other words, using traction alone, and brings into play the still greater power of leverage. This applies most commonly, and is most easily used, when an ear is near the symphysis; but even in this case, had the lateral application of the forceps failed me, I should have fixed the blades antero-posteriorly, the solid blade on the face, and thus, as I have said, have had great leverage power placed at my disposal, by revolving the face round the pubes. It will be seen, therefore, that, when this has to be done, the property of not injuring the spine becomes of the very greatest importance, as it enables us to bring into operation a new and more effective power than we otherwise possess, and which, but for this, we could not have used, from the fear of deforming the child. What practitioner, let me ask, would venture to apply a blade of any forceps except my own solid one over the face? And yet I have found that this can be done, with ordinary care, without any injury being inflicted. Whatever forceps, therefore, the accoucheur may ordinarily choose to use, it must be evident that, for properly using leverage, and for applying over the face of the child, a straight instrument with a solid blade should always be at his command.

(*To be continued.*)

ARTICLE X.—*Quarterly Report of the Royal Maternity and Simpson Memorial Hospital from 1st November* 1881 *to 31st January* 1882. By ALEXANDER RUSSELL SIMPSON, M.D., F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh, President of the Obstetrical, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society,* 23*rd March* 1882.)

DURING the quarter when I last had charge of our lying-in institution I had the satisfaction of having as house surgeons Mr James

Hewetson, M.B., Buchanan Scholar for 1881, and Mr John Waugh, M.A., M.B., the latter of whom has drawn up the report which I now present to the Society.

Extern Cases.—The extern cases were numerically below the average; they numbered 90, of which there were 14 primiparæ and 76 multiparæ.

The average age of the former was 22½ years, of the latter 29¼ years.

As regards the mortality, there was 1 death among the mothers, following on abortion at three and a half months. There were 10 fœtal and infantile deaths, there being 3 abortions, 5 still-born, and 2 infantile deaths (one from debility three hours after birth, one from convulsions four days after).

Of the 87 labours at or near full term, 80 were natural; 1 was laborious and complex (labour commenced with rupture of membranes, forceps were applied for inertia in second stage, labour was complicated by adherent calcareous placenta, which was removed by hand, and there was considerable hæmorrhage); 2 were laborious (in 1 of which forceps were used for inertia in second stage; considerable post-partum hæmorrhage followed, the inertia after delivery being complete; in the other the second stage was lingering, position R.O.P., in which case the occiput did not rotate); 2 were preternatural (1 breech, two months premature, a case of stillbirth; 1 a case of exomphalos, narrated at length at page 873 of this Journal); 2 were complex—1 a case of twins, both male and alive, both L.O.A. position, two complete placentæ, united at one edge by membrane: patient, aged 40, was confined of her 15th child; 1 in which a large cystic tumour in the posterior wall of vagina obstructed the head. The tumour was aspirated, and ℥xx. serum evacuated; axis-traction forceps were applied to the head, which was engaged at the brim, and delivery effected, the child being still-born. The case was complicated by maniacal symptoms, and by severe dyspnœa from chronic bronchitis and asthma. One case of gravid retroversion between the third and fourth months occurred in a patient who in a previous pregnancy had suffered from a similar condition; 121 ounces of urine were drawn off; spontaneous reposition of the uterus took place; a large Hodge pessary was introduced, and allowed to remain for a month. The after progress was entirely satisfactory.

Intern Cases.—The cases treated inside the Hospital were 54 in number, 25 being primiparæ and 29 multiparæ; 17 were married, 37 unmarried.

Ages of Patients.—The average age in the case of the primiparæ was 22 years, in the multiparæ 28 years.

The intern cases may be considered under the respective heads of Pregnancy, Parturition, and Puerperium.

I. Pregnancy.

The short period during which patients remain in the Hospital previous to their delivery renders any extended observations impossible. In 33 cases labour was in progress when patient was admitted. Of the 54 deliveries there were,—i.-para, 25; ii.-para, 18; iii.-para, 6; iv.-para, 4; vi.-para, 1.

The chief complications of pregnancy noted were as follow:—One patient had suffered from acute bronchitis for a week previous to admission. When first seen she was found to be developing the symptoms of pneumonia, from which she died, as hereafter stated, sixteen days post-partum.

One suffered from most distressing pruritus vulvæ for the last three months of pregnancy. Under astringent vaginal injections, and the application of an ointment containing iodide of lead, camphor, and carbolic acid, all the symptoms disappeared a fortnight before labour. [The house surgeon reports that he treated with the same ointment, without the injections, a patient in the country eight months pregnant, suffering severely from the same condition. The result was equally satisfactory.]

In one case gonorrhœa formed a complication during the last month. The puerperium lasted 28 days, owing to an attack of (gonorrhœal ?) peritonitis. The child suffered from purulent conjunctivitis, also probably gonorrhœal.

Seven patients were the subjects of syphilis. In one the secondary symptoms appeared about the seventh month of pregnancy. The child, apparently healthy at birth, showed signs of syphilis after patient's dismissal from Hospital.

In one patient, who was treated for a miscarriage at the fifth month, the disease was contracted twelve months ago. She was six months previously the subject of an abortion at the third month. Eighteen months ago she was delivered of a healthy child.

In one syphilis was contracted about two and a quarter years ago. She had previously borne two healthy children. Two years ago she had an abortion at the third month; twelve months ago a miscarriage at seven months. The labour in the present instance was again premature, and the child was still-born, putrid.

One suffered from primary syphilis in the previous pregnancy, in which case the child died at the age of 3 months. On this occasion the child died of trismus on the sixth day.

One contracted the disease five years ago, at the time of an impregnation, apparently. The child developed syphilitic symptoms, and died at the age of 3 months. Twelve months ago she was treated for gonorrhœa. In the present case mother and child left Hospital seemingly both quite healthy.

One had previously suffered from syphilis. Had given birth to three still-born children. The present child survived.

One patient showed marked signs of hereditary syphilis, and suffered from (syphilitic) ozæna. The child was apparently healthy.

II. PARTURITION.

Duration of Labour.—In the 54 intern patients the average duration of labour was,—first stage, 11 hrs. 21 min.; second stage 1 hr. 33 min.; third stage, 19 min.—making a total average duration of 13 hrs. 13 min. In the case of the primiparæ the duration was,—first stage, 13. hrs. 17 min.; second stage, 2 hrs. 18 min.; third stage, 22 min.; whole labour, 15 hrs. 57 min. In the multiparæ the average duration was,--first stage, 9 hrs. 14 min.; second stage, 51 min.; third stage, 15 min.; whole labour, 10 hrs. 20 min. The duration of the average primiparous labour was therefore fully one-half greater than that of the average multiparous case.

Presentations and Positions.—Of the 54 cases all were vertex presentations except 3, which were pelvic (2 breech and 1 footling). As regards *position*, the proportion in the 24 multiparæ was,—L.O.A., 19; R.O.P., 4; R.O.A., 1; L.O.P., 0. In the primiparæ, 24 cases,—L.O.A., 15; R.O.P., 5; R.O.A., 4; L.O.P., 0. Of the 3 breech cases, 1 was R.S.P.; 2 L.S.A. Of the remaining 3 cases there was 1 ear presentation (in a premature putrid fœtus), 1 unascertained, and 1 abortion.

Plural Births.—There was 1 case of twins in a ii.-para, who had previously been confined of healthy twins, both female. Both were vertex, L.O.A. There were two distinct bags of membranes, adjacent surfaces adherent. The smaller child was born first.

Sex of the Children.—Of the 55 infants, 35 were male and 20 female, including the twins, which were both female.

Mortality.—There was 1 maternal death, as stated below. There were 10 fœtal and infantile deaths, viz., 7 fœtal,—1 abortion, 4 putrid, 2 still-born (1 hydrocephalic breech, 1 after the operation of basilysis); 3 infantile, viz., 1 from convulsions, 1 from atelectasis pulmonum, 1 from trismus.

Classification of Labours.—Natural, 40. Laborious, 9. Preternatural, 2 (breech). Complex, 1 (twins). Preternatural and complex, 1 (hydrocephalic breech). Natural and complex, 1 (complicated by lung disease). Of the laborious labours, 3 were lingering, 6 instrumental.

Instrumental Labours, 6 (5 forceps, and 1 basilysis). As the latter has already been made the subject of a special communication to the Society, further notice of it is now omitted. A short note on each of the forceps cases may be interesting. In all the instrument used was Prof. Simpson's axis-traction forceps.

CASE 1.—Mrs B., ii.-para, age 33. Fifteen years ago patient was delivered of a male child after a labour lasting three days. Labour was in progress when patient was admitted. The cervix was found hard and cartilaginous. Labour began at 4 A.M. on the 11th Dec.; at 12 midnight the membranes burst, the os being then the size of a small tea cup. The dilatation proceeded with great slowness on the 12th from the rigidity of the os, which was apparently due to deep laceration and cicatrization in the previous labour, and the feeble and infrequent character of the pains. Hot carbolized injections and unguents had no effect on the rigid cervix; three 20 gr. doses of chloral hydrate were also given. At 11.25 P.M. on the 12th forceps were applied to the head still within the cervix, which was now more dilated, and the child delivered. It was born in a state of suspended animation, but after the withdrawal of a considerable amount of mucus from the larynx and back of the throat by means of a catheter, the application of hot and cold stimuli, and various methods of artificial respiration, kept up for four hours, its breathing became regular, and the surface of the body warm and red. A considerable portion of the left lung, however, remained in a condition of atelectasis, and from this cause and exhaustion the child died seventeen hours after delivery. The puerperium on the part of the mother was normal, the temperature never rising above 98°·6.

CASE 2.—J. H., i.-para, age 22. Pains began 9·50 P.M. 13th Dec.; os was fully dilated six hours later, but pains then became less strong. At 8.30 A.M. on the 14th the head was almost on the perineum, pains absent. At 10.30 the head was found to be making no progress. Delivery was at 11 A.M. easily effected by forceps. The whole duration of labour was 13 hrs. 50 min. Patient was dismissed well ten days later.

CASE 3.—M. M., i.-para, age 24, was in labour when admitted on Dec. 18th. Vertex; R.O.P. position; mechanism, complete internal rotation of occiput. Duration of stage i., 14 hrs.; ii., 4 hrs. 35 min.; iii., 7 min. As head had been over 2 hours on the perineum, and second stage had lasted 4¼ hours, patient becoming exhausted, and swelling of perineum threatening, forceps were used. Expression of placenta from uterus because of some hæmorrhage. Puerperium normal.

CASE 4.—M. A., i.-para, age 19. Labour began 1 A.M. 31st Dec. Os fully dilated 8.50 P.M.; waters escaped 6.30 A.M. Presentation vertex; position, L.O.A.; mechanism, flexion at brim was extremely well marked. Vagina narrow; external conjugate measured 6⅛ in.; interspinous drain, 7½ in. Duration of stages i. and ii., 20 hours; iii., 10 min. The membranes ruptured 5½ hours after the commencement of labour, when the os was dilated to the size of a crown-piece. During the day pains were comparatively feeble and irregular, the os dilating only very slightly. About 8.40 P.M. axis-traction forceps were applied within the cervix. It had been noticed that the inlet of the pelvis was small (justo-minor), and a considerable amount of traction was required. The forceps had to be taken off and re-applied during extraction, owing to the rotation of the head. Mother and child did well. Patient was dismissed fourteen days after parturition, when the cervix was found to be much lacerated and deeply fissured in all directions; vagina narrowed at roof by several cicatricial bands.

CASE 5.—E. W., i.-para, aged 30; pains began 3 A.M. 25th January; os fully dilated at 2.30 A.M. on 26th; waters escaped at 6.25 A.M. on puncture of the membranes. Presentation vertex;

position R.O.P.; mechanism, complete internal rotation. Duration of stage i., 23½ hours; ii., 4½ hours; iii., 4 min. Patient came into hospital about 8.30 A.M. on the 25th; during the day the pains were moderately strong, not very frequent. They then almost ceased for a few hours, but about 2 P.M. recommenced, and continued fairly strong till 2 A.M. (26th). During this time the head slowly rotated, the sagittal suture at 8 P.M. being transverse. Descent was very delayed, and the bag of membranes did not rupture. The os was fully dilated at 2.30 A.M., and the head began to descend more rapidly; but the pains again went off, and she had intervals of sleep until 5. At 5.30 the head was found fully rotated and low down on the pelvis. As the pains were still feeble, and the second stage had lasted four hours, forceps were applied, the pains for the last hour having caused no appreciable advance of the head. Puerperium was protracted, lasting twenty days, during which time the temperature occasionally rose high.

CASE 6.—Case of breech presentation complicated with minor hydrocephalus. J. H., i.-para, aged 22. Pains began 6 A.M. December 12th; os fully dilated at 7 P.M.; position was L.S.A.; mechanism, little or no rotation of left hip towards arch of pubes; head jammed at the brim, and extended. Artificial interference; traction was made on the breech, combined with strong pressure from above, when the child was born as far as the umbilicus. Flexion of the head was produced by external pressure and the Prague seizure; the delivery of the head was completed by pressure on the forehead through the rectum. The child was afterwards found to present a condition of minor hydrocephalus, the anterior fontanelle extending to the root of the nose, and the sagittal suture being open. The forehead was specially prominent. The child made no efforts to breathe, although the ordinary methods of resuscitation were tried for some time.

In 4 cases the perineum was ruptured to such an extent as to demand stitching. In 3 of these cases the cure was complete; in the fourth the stitches gave way, and the wound healed by granulation.

It is interesting to note that in the only three cases of difficulty in extraction of the placenta that organ was small, weighing 14 oz. in a case of severe hour-glass contraction which necessitated the introduction of the whole hand to the uterus for its removal, and 12 oz. in each of two other cases in which expression of the placenta from the uterus was difficult. The average weight of the placentæ during the quarter was 1 lb. 6¾ oz.

III. PUERPERIUM.

The average duration of patients' residence in Hospital was 16½ days, the average duration of the puerperium 13¼ days.

Of the 46 patients whose cases were complete at the end of the quarter, the highest temperature during the puerperium was—

Not above 100° F. in 28.
„ 101° F. in 6.
„ 102° F. in 5.
„ 103° F. in 3.
„ 104° F. in 4.

The only case which gave rise to grave anxiety, and which ended fatally, was that of Mrs H., ii.-para, aged 30. She was in labour when admitted at 2 A.M. 9th January. Vertex; L.O.A.; mechanism normal. Duration of stages i. and ii., 7 hours 7 min.; iii., 3 min. No artificial interference.

Peculiarities.—Patient came in suffering from a sharp attack of bronchitis, which had existed a week; breathing laboured; some coughing and pain in the chest.

At 10 A.M. 9th January, seven hours after her easy labour, patient was found to be flushed and restless; temperature, 99°·4; pulse, 120, bounding and full; respiration, 36 per minute; and she complained of lancinating pain over the base of the left lung, aggravated by any attempt to take a full breath. There were no after-pains, and no clots in the lochial discharge, which was normal in character and amount. During the next eight days she showed all the symptoms and signs of pneumonia of left side, and she was treated in the ordinary manner, at first aconite, quinine, and poultices, latterly stimulants and digitalis. On the eighth day great prostration suddenly set in, from which, under stimulant treatment, she rallied on the morning of the 22nd January; the fourteenth day post-partum she had several severe rigors; in the evening her respirations were 62; urine and fæces passed involuntarily. On this and the following days she had subcutaneous injections of ether in addition to the other treatment; but she gradually sank, was unconscious for the last two days, and died on 24th January, about 16½ days after the birth of the child. At the autopsy Dr Hamilton found the left lung pneumonic and bronchitic in both lungs, filled with pus or muco-pus; left kidney and spleen showed recent infarctions; mitral valve showed large bunch of recent vegetation; uterus contained in its cavity a piece of placenta about 2 inches long still attached to the mucous membrane.

The House Surgeon would note, in reference to the piece of placenta retained and its possible effects, that the pneumonia which was apparently the cause of death was developed within a few hours after patient's admission. The labour was easy; there was no interference needed to expel the placenta, which came spontaneously three minutes after the child; there was no hæmorrhage at or after the labour, all the lochial discharge disappearing on the second day, and reappearing only when the inflammation abated on the ninth or tenth day. Carbolic injections were continued for the first three or four days, and resumed when the lochia reappeared. There were no after-pains or other indication that the placenta was not entirely expelled; examination of the secundines immediately on their expulsion showed no apparent deficiency of placental tissue.

Part Second.

REVIEWS.

Rheumatism: its Nature, its Pathology, and its Successful Treatment. By T. J. MACLAGAN, M.D. London: Pickering & Co.: 1881. Pp. 333.

THERE are few diseases more worthy of careful investigation than rheumatism. Not that it really originates all the pains and cripplings with which it is usually credited, for acute rheumatism never cripples or deforms, and is not responsible for a tithe of the ailments commonly ascribed to it. Even heart complaint, *facile princeps* of all rheumatic ills, does not owe its origin to rheumatism in probably much more than one-third of all cases; but when it does, it is not the old, the wayworn, and weary who are seized, but it is the young, to whom everything is fresh and fair, who have the fountain of life thus poisoned at its source. When we look around and see how many such cases there are within the ken of each one of us, we cannot but acknowledge that the extinction of rheumatism would be a task worthy of the genius of a Jenner, and that any ordinary life would indeed be well spent in even making the attempt.

In quite recent times a very considerable advance has been made in this direction, the duration of an attack of acute rheumatism being nowadays shortened from many weeks to but a few days. The basis of this remarkable treatment has long been a domestic remedy with the Hottentots of South Africa; but scientific Europeans were apparently led to adopt it from a preconceived theory as to the cause of rheumatism, and the success of the treatment almost justifies the theory. Many a good form of treatment has, however, been based on incorrect premises and bolstered by false reasoning, and it is doubtful whether we are yet any nearer the extinction of rheumatism, any nearer the erasure of rheumatic cardiac affections from the fell category of disease. Nevertheless, as the introducer of the salicin treatment of rheumatism, Dr Maclagan has a pre-eminent right to tell us his views of its nature, though he cannot expect us to accept them unless they hang logically together.

The first four chapters of the book are somewhat thin and watery, and the author only begins to get earnest when he attacks the lactic acid theory of the origin of rheumatism, which, as he rightly says, has been hitherto that most generally accepted. But the lactic acid theory has never been recognised as other than provisional; it rests on no surer basis than that all the secretions in rheumatism are known to be more acid than usual, that lactic acid is normally present in the body, that it is likely to be in excess in the conditions in which rheumatism occurs, and that by some few it has been found in excess in rheumatic patients. A few observers have also found rheumatism come on when lactic acid has been freely used, mainly as a treatment for diabetes; but it has happened that in quite similar cases the rheumatism has been recovered from, though large doses of lactic acid have continued to be administered. The general failure of the alkaline treatment of rheumatism has also done much to discredit the lactic acid theory, while Richardson's experiments, which were supposed to support it, have not only been disproved by Möller and Reyher, but were carried out in dogs, cats, and rabbits, animals which have no sweat-glands and are not liable to rheumatism. The lactic acid theory has always been held loosely. The author has brought forward no new arguments against it, has not even given full value to those already known, and its disproof, even were it complete, is a matter of no moment.

But our author attacked it because he has a new theory to replace that which he objects to. Rheumatism is, according to him, a miasmatic disease. Already we have a small library as to the meaning of a miasm and the nature of a miasmatic disease, and it is some comfort that our author leaves us in no doubt as to the view he takes. Miasmatic disease is a germ disease; the malarial poison is an aggregation of "shining ovoid spores," the *bacillus malariæ.* "By inoculating rabbits with *liquids*" (of what nature is not stated) "taken directly from malarial soil, and containing this bacillus, there was produced fever, often of an intermittent type" (page 74). But much less than the injection of "shining ovoid spores" will produce fever, often of an intermittent type. Martial says:—

> "Languebam, sed tu comitatus protinus ad me
> Venisti centum, Symmache, discipulis.
> Centum me tetigere manus aquilone gelatæ:
> Non habui febrem, Symmache, nunc habeo."

The germ theory for the present is paramount, however, and, without putting it higher than the lactic acid theory in regard to rheumatism at least, it is for the present a fairly good working theory. Our author enters largely into the points of resemblance between malarial fevers and rheumatism. He further divides the malarial fevers into eruptive and non-eruptive. *An eruption* in malarial fever is, according to our author, "a" local lesion, and, of course, the joint affection in rheumatism is *the eruption* in this the sole known example of an eruptive malarial fever. Our author does not say why he excludes intermittents and remittents from the eruptive class of malarial fevers, nor does he explain why the local (splenic, etc.) lesions in these undoubtedly malarial fevers are not as much entitled to the term of "an eruption" as the joint affection in rheumatism. Having once, however, determined that rheumatism is a malarious disease, it is not difficult to persuade one's self that of all the remedies hitherto employed quinine was likely to be the most successful. But it had been fully tried without marked success. However, what impressed our author strongly was the great fact that nature seemed always to "produce the remedy under climatic conditions similar to those which give rise to the disease" (p. 192). Malarious diseases "prevail chiefly in marshy localities in which there is much decomposing vegetable matter" (p. 67), and "the poison does not operate at more than a certain height above the sea-level" (p. 69). The Cinchonaceæ grow on the rocky slopes of the Andes, from 1200 to 10,000 feet above the sea, and the dryer the soil the better the bark (Christison). The fact of these conditions being *so much alike* (?) led our author to seek a remedy for rheumatism (which prevails also in low-lying and damp, but cold, localities) among those plants which haunt similar localities, notably the willows, well known to contain in their bark an alkaloid similar to quinine. The less we say about the logic the better. The result has been a great success, and in salicin we have a remedy for rheumatism which, for the present, divides the palm with other salicyl compounds. It is a pity that our author prides himself on the correctness of his "logical inference," and stigmatizes as "empiricism" the employment of other salicyl compounds in rheumatism by Stricker and Reiss, for this provokes inquiry and comparison.

For more than one hundred years willow bark, and for more than fifty years salicin, have been known as febrifuges, and esteemed by many as superior to quinine. Salicylic acid was known as a derivative from salicin, but it has only recently been known to be also a derivative from carbolic acid. In Germany the derivation of salicylic acid from carbolic acid led at once to its employment as a disinfectant. For this it was not found suitable, but the previous history of salicin as a febrifuge, and the germ theory of disease which then arose, led to its being used in every form of febrile disease, notably by Moeli of Rostock; and if Dr Maclagan will only look in the *Lancet* for 1875, he will find that for more than a year before he employed salicin, salicylic acid and its compounds were the fashionable febrifuges in Germany. Prepared from carbolic acid, they were cheap, much cheaper than salicin, and at least as efficacious; but they were also dangerous from poisonous impurity. At the present day many observers, notably Senator, hold that salicin owes its virtues to being changed into salicylic acid in the blood, and many also hold that if salicylic acid is freed from risk of poisonous impurity by being prepared directly from salicin, its compounds are much more efficacious in the treatment of rheumatism, and quite as innocuous, as salicin itself.

Dr Maclagan enters very fully into many pathological points of much interest, specially as to the connexion of cardiac diseases, cerebral affection, chorea, and hyperpyrexia with rheumatism. In these chapters there are many statements with which we do not agree. It is not, however, worth while disputing a pathology avowedly written from the germ theory point of view, or one which bases the diagnosis of endocarditis solely on the occurrence of a murmur, or of myocarditis upon muffling of the sounds. ("If, in a case of acute rheumatism, in which we are sure that no endocardial murmur existed at our last visit, we find one developed at our next, we may be certain that it is due to a recent endocarditis"—p. 144. "It is in the character of the sounds that lies the diagnostic sign of myocarditis. On careful examination they are found to lack their natural pitch. They are quite audible; but they want the clear tone of health—they are muffled and indistinct"—p. 173).

By-and-by, when Dr Maclagan has had a little more experience, he will learn that an endocardial murmur may be heard—at one point or other of the cardiac area—in every case of acute rheumatism, and is not in itself ever an indication of endocarditis. He will also learn that muffling of the heart sounds is only the first step towards a murmur, and is no more to be regarded as an indication of myocarditis than the full-developed murmur is to be looked upon as a proof of the existence of endocarditis. The value of this work lies purely in its therapeutics, and is not impaired by its faulty pathology or by its failure to connect rheumatism with "shining ovoid spores" or any other form of germ, not even by the absurdly illogical proposition brought forward to prove that the selection of salicin was not empirical.

Chronic Bronchitis; its Forms and Treatment. By J. Milner Fothergill, M.D., Edin., Member of the Royal College of Physicians of London; Senior Assistant-Physician to the City of London Hospital for Diseases of the Chest (Victoria Park), etc. With numerous Illustrations. London: Baillière, Tyndall, & Cox: 1882.

This goodly octavo of 160 pages is characterized by the qualities which are prominent in Dr Fothergill's former publications. The style is clear, lively, sometimes brilliant, and not burdened with commonplace and conventionality. This makes his books very readable, and gives them a human interest over and above their scientific teaching.

The author is *au courant* with the modern pathology and the numerous methods by which that study is prosecuted; so that men who have been in practice during an earlier generation must feel some difficulty in keeping pace with him, but *le jeune gens* can have no such apology. The illustrative drawings and diagrams are valuable in elucidating the text, and seem to be well executed.

We have read the chapter on "Treatment" with much interest.

The author is filled with a fine, wholesome enthusiasm for his profession, and marshals in an interesting manner the various remedies—some of them old and time-honoured—in the places which experience assigns to them. It is very instructive and curious to discover that the efficacy of many which our ancestors had ascertained to be useful really depends upon properties possessed in common with medicines peculiar to recent chemistry and modern research.

We attach much importance to the strong warning which Dr Fothergill gives against the imprudent use of opium, chloral, and some other narcotics in bronchitis and pulmonary affections generally, when respiration is much interfered with. We may quote a short passage on this subject as a specimen of his style:—"The patient would, as a rule, sleep readily enough if the necessity for voluntary effort, the conscious struggle for breath, were only put in abeyance. Relieved from this necessity, the patient would sleep soundly without any narcotic. The feeling of drowsiness becomes positively painful in time, and the patient piteously begs for a little sleep. A sleeping-draught, or a composing-draught, as it is frequently denominated, is given; and the patient sleeps—to wake no more. In such conditions of serious danger all narcotics are positively forbidden by the circumstances—are simply lethal if operative."

We should have liked to hear Dr Fothergill more expressly on the subject of antiseptic inhalations in chronic bronchitis, as counteracting the tendency which retained *sputa* seem to have in propagating the disease from one portion of the lung to another. This is probably the principal way in which *carbolic acid, terebene, creosote, eucalyptol, benzoin* do good under such circumstances. The marked usefulness of Friar's balsam (tinct. benzoin), in the dressing of wounds for centuries, seems to throw light on its renewed importance now as an antiseptic both in surgery and physic. Dr Fothergill is a suggestive writer, and we throw out this for his consideration in view of a second edition.

Our limited space prevents us from entering into further details. We cordially recommend the book as a valuable contribution towards the pathology and treatment of a disease so common and so deadly in our changeable climate.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M.D. 5th Edition. Pp. 836. London: H. K. Lewis.

It is a pleasure to peruse a work such as the one before us, and as reviewers we have but one difficulty—there is little to find fault with. The author understands what he writes about from a practical acquaintance with the diseases incidental to infancy and childhood, and also thoroughly comprehends their pathology and therapeutics. We have carefully read the work, and will touch only upon a point or two.

Chapters VII. and VIII., upon alimentation, deserve notice. Dr Smith had infants weighed before and after nursing, and artificial food, when given, was weighed before and after each feeding, and so the quantity taken at each meal was determined. It was found, *e.g.*, that infants under five weeks of age nursed on the average 12·41 ounces of breast milk in the twenty-four hours, the number of nursings being eleven in the same time—*i.e.*, about 1 ounce is taken on each occasion; and from this he easily determines what amount of cow's milk or artificial food should be given to bottle infants. A set of tables is added, from which the above can be readily seen.

The chapter on rickets is well worthy of perusal. After pointing out the antagonism almost between rickets and scrofula, he goes on to mention the cause of the former, which he considers to be the use of food not sufficiently nutritious, or, if nutritious, such as is not adapted to the feeble digestive powers of the infant, as breast-milk thin and deficient in nutritive properties, or artificial food which is not adapted to the age of the infant. He states the disease is not due to the want of lime and phosphoric acid in the food, inasmuch as rickets occurs in those whose food contains a sufficiency of these as well as in those in whom they are deficient. Without doubt the immediate cause is an altered and abnormal nutrition of the osteoplastic tissue, and he inclines to the theory that this is brought about by something introduced into the system from without or produced during the digestive processes (*e.g.*, lactic or some allied acid), which irritates the bone-producing tissues, and so changes their function that true bone is no longer produced. At the same time, this irritant may probably act as a solvent on the lime contained in the nutritive fluid of the body, and so permit of its elimination from the system instead of forming bone within it. Dr Heitzman of New York, formerly of Vienna, is chiefly responsible for this theory, which arose in his mind after noticing the effect of giving to young animals lactic acid in their food, when they became distinctly rickety.

In the chapter on measles he remarks of the livid form, or rubeola nigra of writers, that in his opinion this should usually not be looked upon as a distinct species, as he considers the dark colour is due to internal inflammation, usually capillary bronchitis or pneumonia, which prevents full decarbonization of the blood in the lungs.

We think he rather understates the time in which exfoliation of the cuticle after scarlet fever occurs. "Several days," he mentions; but a good many days usually elapse before desquamation is complete, and until the patient is in a safe state to mingle again with other children.

In describing the kidney in post-scarlatinal nephritis, the author omits to mention the enlargement of the Malpighian bodies, and the great development of cells in and about them; and, in the examination of the urine for albumen, considers the microscope to be more accurate than the spirit-lamp and nitric acid, which is well enough if renal casts, altered epithelium cells, or blood-corpuscles are to be easily found. In the treatment of scarlet fever he prefers the use of ice-bags to the wet pack or bath for the purpose of reducing temperature, and places them upon the head and round the neck of the patient, "as cold applied over the great vessels of the neck promptly abstracts heat from the blood."

In discussing diphtheria he points out how it may be primary or secondary, the latter occurring during epidemics of other infectious diseases, especially those in which we find inflammation of the fauces and air-passages, when instances often occur in which patients suffering from apparently simple catarrhal inflammation of these parts suddenly present the symptoms of diphtheria ending fatally. He freely refers to the works of Oertel, Bühl, and Hueter regarding the cause of this disease, which, the former says, "stands on the very borders of the visible," viz., the micrococcus and microbacterium; but, at the same time, doubts the deductions drawn from the experiments of Erfurth and others, that diphtheria is entirely local in its commencement, and is amenable to local measures, in which we quite agree. In the opinion of our author the cause is something not yet discovered, and more subtle than the above, which produces such deterioration of the tissues and blood that they become a nidus in which bacteria are easily and rapidly developed—in other words, that it is a constitutional disease from its inception. This naturally affects his treatment; and he points out how the germ theory of this disease has often led to active local treatment, supplanting almost constitutional, at least in the early part of the disease. Under remedies we would only mention the fact, as proved by the experiments of Dr Chadbourne and himself, that the best solvent for the membrane—at least when out of the body—is lime-water, liquor potassæ, or liquor sodæ, which may be used with the atomizer or spray-producer.

The chapter on typhoid fever is short, and the only point we notice is his preference for cold water bathing over the administration of salicine or quinine to reduce temperature. That on cerebro-spinal fever is full. Dr Smith saw an epidemic of it in New York during 1872.

Under chorea he relates a case of his own that ended fatally, and where he had an opportunity of having the brain and spinal cord examined, which was done by Professor Delafield, a well-known microscopist. The brain presented no change apparent to the naked eye except congestion, and on microscopic examination nothing was found in any part of it except a uniform filling of the vessels with blood. There were no apoplexies, nor any change in the walls of the vessels. The spinal cord was perfectly normal.

He will consider the disease one of the neuroses until the microscope detects some anatomical cause in the cerebro-spinal system of which we are at present ignorant. Among the drugs mentioned as having been employed in the treatment of this affection, he considers, from his own experience, the arsenical and ferruginous compounds give more satisfaction than any or all the other measures.

In treating of Potts' disease of the spine, he, curiously enough, does not mention the use of Sayre's jacket.

The chapter on pleuritis is particularly interesting and valuable. It is reprinted from the *New York Obstetric Journal* of 1880 and 1881. It is one of the best-written in the whole work.

Skin diseases are cut very short, and only a few mentioned, eczema being the only one treated of at all fully.

The work is full of original and practical remarks which will be particularly acceptable to the student and young physician; but, at the same time, we can with great sincerity commend it to the notice of the profession in general, which the fact of its being the fifth edition still further warrants. The only part with which we are not satisfied is the index, which is far too short for such a work and ready reference; and this, we hope, may be in the next edition materially extended.

Materia Medica and Therapeutics: Inorganic Substances. By CHARLES D. F. PHILLIPS, M.D., M.R.C.P., and late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital Medical School. London: J. & A. Churchill: 1882.

THIS is an exceedingly able work on a very important part of the Materia Medica. Since the publication of his former volume on the vegetable kingdom, Dr Phillips has been well known as one of the best writers on this important department of medical science. The present volume was written under very painful circumstances. The author sustained serious injury from a railway accident in 1877, which for two years prevented him from doing any professional or literary work, and we regret to learn that he is still suffering from the effects of that accident, so that the present volume was produced under great difficulties; notwithstanding we have in this treatise one of the best books on the inorganic substances of the Materia Medica.

With regard to the arrangement of the book there is room for difference of opinion. The author begins with the elementary substances, oxygen, nitrogen, hydrogen, sulphur, phosphorus, iodine, bromine, and chlorine. He next takes up water, including sea-bathing and the mineral waters. So far we consider the arrangement excellent. The remaining substances of the pharmacopœia are arranged alphabetically, a plan very good in a work of reference, but by no means well suited for the student, inasmuch as few teachers would so consider the various officinal medicines in their lectures. For example, *lithium* comes between mercury and magnesium, with which it has little or no connexion, instead of coming along with potassium and sodium, with both of which it is closely allied, chemically, physiologically, and therapeutically.

The author shows great research, and has clearly and correctly given the views of the authorities referred to, in most cases giving also the references. His mode of treating the various substances is admirable. The same plan is followed in all cases. He first gives the preparation of the substance, with its chemical and physical properties, then its compounds, with their preparation, their characters, and tests. Next he gives the absorption and elimination, showing how it is absorbed and eliminated from the system. Its physiological actions, external and internal, are next given, showing very clearly the various systems acted on by the special drug under consideration. He next gives what he calls the "synergists," or those medicines which assist its action, next its antagonists and incompatibles, afterwards its therapeutical actions, external and internal, pointing out most clearly the various diseases in which it will be found beneficial. He next gives the "contra-indications," if any, then its preparation and dose, and lastly, its adulterations. By such a method Dr Phillips puts very clearly and forcibly before his readers the salient points of the various articles of the inorganic substances.

We have much pleasure in highly recommending this work to our readers. The medical practitioner will find it a most valuable work of reference. On account of the size of the volume (including indices, 820 pages), and remembering it treats only of inorganic substances, we fear it can never be a favourite text-book with students; but it is a book which every student should endeavour to possess. It is written in a fluent and elegant style, and is undoubtedly a standard work on the inorganic materia medica.

Pathologie und Therapie der Hautkrankheiten in Vorlesungen für Praktische Aerzte und Studirende. Von Prof. Dr MORIZ KAPOSI, Vorstand der Klinik und Abtheilung für Hautkrankheiten an der Universität, Wien. Zweite verbesserte und vermehrte Auflage. Erste halfte. Wien und Leipzig: Urban und Schwarzenberg: 1882.

The Pathology and Treatment of Diseases of the Skin, in Lectures for Practitioners and Students. By Dr MORIZ KAPOSI, Professor of Skin Diseases in the University of Vienna. Second Edition, improved and enlarged. First half. Vienna and Leipzic: Urban & Schwarzenberg: 1882. Pp. 432.

WITHIN two years the first edition of Professor Kaposi's admirable work has been exhausted, and the first half of a new and improved one has just appeared. This favourable reception bears out the good opinion we expressed when reviewing it shortly after its publication. In the preparation of this new edition, excision, often neglected, has been judiciously combined with addition, and little of what has been written on skin diseases of recent date has escaped notice by its author's observant eyes.

The minute structure and functions of the skin are considered in detail. No notice is taken, however, of the views of Klein and Heitzmann as to the structure of the prickle cells and the nature of the spines themselves. Kaposi, too, leans to the original view that the horny layer is produced from the mucous layer by a gradual process of change. We are inclined to believe with Langerhaus and Piffard that those layers are separate and independent. The entirely distinct characters of their component structures, and the mode in which they behave with regard to reagents, among other circumstances, point to such a conclusion. The diagnosis of skin diseases is handled with much ability, as was only to be expected from one so thoroughly a master of it himself. One hint may be reproduced, that the statements made by the patient are to be measured by the objective symptoms, not *vice versâ*. It is also insisted on that in treating a skin disease it is by no means sufficient to determine its nosological position, affix a name, and proceed to treat this. "Our treatment is to be directed against individual symptoms, irrespective of what diseased process the one or the other morbid manifestation may be linked with. With the cure of individual symptoms the disease, which is but the sum of them, may itself disappear." After a review of the various forms of classification which have from time to time been made use of and suggested, including a graceful allusion to the most recent and ingenious and suggestive one of Auspitz, the author expresses his opinion that, so far, none is simpler or, on the whole, better than Hebra's original scheme. It is customary in foreign works on skin diseases to include a description of the acute exanthemata, which are considered by us to belong to general medicine. This part of Kaposi's treatise has undergone no appreciable alteration, but will be found to contain some valuable therapeutic hints, more particularly with respect to some of the sequelæ of these, to which our attention has lately been drawn by Dr James Carmichael in the pages of this Journal. To us, accustomed to see the really marvellous influence which full and frequent doses of the tincture of the muriate of iron have in controlling even the most menacing instances of erysipelas, it does seem remarkable that this remedy is not even mentioned by Kaposi. One fair trial would, we think, convince him that this treatment, so persistently advocated by Dr Charles Bell, is of the utmost value. It would appear somewhat doubtful, from what is said about the use of β naphtol in psoriasis whether it has fulfilled all that its introducer hoped. He mentions that even after a third or a fourth application of a half per cent. alcoholic solution, a dry gangrene of the epidermis may result. So far as our experience goes, in four cases where it was fully tried in solution and in ointment, the results, as regards the cure of the psoriasis, were not so satisfactory as to give encouragement for a more extended employment, while its application caused considerable pain. The part concludes with the opening pages of the lectures on eczema, which were in the first edition among the most interesting and most valuable in the volume. When completed, the work will rank as one of the best on the subject of which it treats.

Deafmutism, and the Education of Deaf-Mutes by Lip-reading and Articulation. By Dr ARTHUR HARTMANN, Berlin. With Numerous and Important Additions written by him expressly for this Work, and Nineteen Statistical Tables. Translated and Enlarged by JAMES PATERSON CASSELLS, M.D., Member of the Royal College of Surgeons, England; Fellow of the Faculty of Physicians and Surgeons, Glasgow; Aural Surgeon to and Lecturer on Aural Surgery at the Glasgow Hospital and Dispensary for the Diseases of the Ear. London: Baillière, Tindall, & Cox, King William Street, Strand (Paris, Madrid): 1881.

DR CASSELLS has long been an advocate for lip-reading and articulation in the education of deaf-mutes, and for the purpose of forwarding their more general employment he undertook the preparation of an English edition of Dr Hartmann's standard work. The translation, arrangement, printing, style, and index of the book reflect credit alike on the translator and publishers.

In the original work Dr Hartmann had described the present state of our knowledge and views concerning deafmutism, with which so many of our fellow-men are afflicted, and which places them at such a great disadvantage.

In the first portion of the work the medical and statistical questions are chiefly discussed, using for the former the material furnished by the extant literature, which has not since the time of Schmalz, 1848, Meissner, 1856, and our own Wilde, 1853, been very comprehensive, giving us all the more cause to welcome the translation of this admirable work. In the discussion of statistics those special compilations which comprise whole districts have been mainly used, whilst the reports of deaf and dumb institutions have been left to a great extent out of consideration. The facts that in these institutions, which are unable to admit all the applicants, the number of boys is relatively larger than that of girls, and the number of paying children belonging to the better classes is greater than the number of the children of the lower classes, deprive their statistics of value. Owing to a want of uniformity in the special statistical compilations at present at our command to investigate the nature and causes of the affliction, besides the fact that few have been made, the existing material can only be partially turned to account. There is thus a great dissimilarity in the material obtained, and, with the exception of the Irish statistics, they extend only over small districts.

Owing to the resolutions passed at a conference of the directors of the German Statistical Department, a motion proposed and carried by Dr Hartmann at the otological section of the Natural Science Congress in Baden-Baden, viz., that of including in the census of 1st Dec. 1880 an enumeration of all the deaf-mutes in the German Empire, *failed owing to the unwillingness of the statisticians.* Dr Hartmann, nevertheless, is hopeful that this enumeration will be carried out in some of the separate states, such as Prussia, Meiningen, and Baden.

The second portion of the work consists of the chapters on the education and the instruction of deaf-mutes, and the results of the latter.

We earnestly hope the work, both in the original and by means of this translation, will succeed in exciting a more general interest in deaf-mutes, and in removing the still-existing prejudices against them, thus securing for them greater consideration and an amelioration of their sad lot.

Nervous Diseases: their Description and Treatment. By ALLAN M'LEAN HAMILTON, M.D. Second Edition. London: J. & A. Churchill: 1881.

WE are glad to welcome a second edition of so useful a work as this, in which Dr Hamilton has succeeded in condensing into convenient limits the most important of the recent developments of knowledge in regard to the diseases of the nervous system. Of recent years nervous pathology has attained to such importance as to necessitate very careful description in special works, and among these this volume must take a high place. Commencing with a careful description of the instruments required for the diagnosis of nervous diseases, Dr Hamilton passes on to describe in series the various pathological conditions met with in connexion with the brain, spinal cord, and peripheral nerves. Of these each receives a short notice, which, while tolerably condensed, yet contains probably as much detail as the physician will in most cases desire. Sometimes, indeed, condensation appears to us to have been carried too far, and important points are either altogether neglected or only very lightly touched upon. Such, for example, is the case with regard to the "reaction of degeneration," which every practical physician knows to be of such eminent importance in distinguishing peripheral paralyses from those of central origin. It has no place in the index, and the very brief mention which it receives under the head of Traumatic Paralysis might very well have been extended. As a whole, indeed, electrical diagnosis does not, we think, receive the notice which it deserves.

This volume is, however, on the whole excellent, and is devoid of that spirit of plagiarism which we have unfortunately seen too much of late in certain recent English works on nervous disease. In the matter of paper, printing, and binding, it is all that could be desired.

The Immediate Treatment of Fractures of the Leg by Plaster of Paris Splints. By JOHN CROFT, F.R.C.S., Surgeon to St Thomas's Hospital. From Vol. LXIV. of Medico-Chirurgical Transactions of London. Pp. 12.

To those who know the accuracy and power which characterize every detail of Mr Croft's surgical work, and the patience in observation and conscientiousness in statement in all his publications, the facts and arguments of this little pamphlet will come with convincing force. It is a brief, precise, and well-reasoned statement in favour of a mode of treatment which he has found both safe and certain, while simple in detail and economical in price. It is not a plaster of Paris bandage, but plaster of Paris splints made of well-shrunk flannel, loaded with the gypsum at the consistence of cream, applied at once gently but firmly by muslin bandages, which can be easily cut for examination or refitting. After the first week or two are over the splints can be fixed by firmer gummed bandages, and the patient sent home, to the great relief of the hospital beds. We have seen the splints in use; they are light, easy, safe, and certain.

The Influence of Vivisection on Human Surgery. By SAMPSON GAMGEE, F.R.S.E., Consulting Surgeon to the Queen's Hospital; Vice-President of the Birmingham Medical Institute; Fellow of the Academy of Medicine of Rome, of the Society of Surgery of Paris, and of the Medical Societies of Christiania, and of Boston, Massachusetts. Second Edition. London: J. & A. Churchill: 1882.

THIS eloquent address was delivered in the Birmingham Medical Institute on the 9th of February, and a new edition, with a few retrenchments and also a few additions, has appeared on the 9th of March. We have perused it with much interest, and consider it an able and satisfactory argument in favour of experiments on animals, which constitute an important and often an indispensable element in scientific inquiries, both medical and surgical. We prefer the words "experiments on animals" to the term "vivisection." The latter suggests a very erroneous and exaggerated idea to many minds, as if every animal experimented on were laid open and grossly tortured, while in reality such proceedings are exceptional and seldom contemplated, the great majority of experiments being performed in a delicate manner to determine nice questions in physiology and therapeutics, with nothing fitted to offend or disgust even the most fastidious. We make these remarks in the hope of disabusing many persons of the gross and revolting conceptions which the word "*vivisection*" naturally awakens.

Mr Gamgee, without confining himself to the surgical aspects of the question, shows by a historical induction, which is both interesting and valuable to all who are proud of their profession and of the worthies who have advanced it from age to age, that experiments on animals have led to almost all the real discoveries and improvements which have rendered the practice of surgery what it now is, contrasted with what it was a hundred years ago. It is impossible for us, in our limited space, to enter into details; but we may refer to the researches and experiments on animals which have placed our modes of arresting hæmorrhage on a stable foundation; to the investigation of John Hunter as to the healing of divided tendons, so fertile of subsequent results; and to the grand discoveries of Charles Bell regarding the *sensory* and *motor* nerves, which—much as his sympathetic nature abhorred the infliction of unnecessary pain—he could not have established independently of a few experiments on the lower animals.

Mr Gamgee writes calmly and reasonably, without any unfairness towards those who, because ignorant of facts, are under the influence of misplaced sentiment, and he proposes what may be called a truce or compromise. "Let us reassure," he says, "all kindly persons by giving every possible guarantee that only essential experiments shall be performed, and in the most humane manner possible. Vivisection might be restricted to licensed public institutions, such as medical schools or other scientific colleges, and then under the control of their teaching and governing bodies."

Surely, when, as this address undeniably shows, the art of surgery has owed almost everything to wisely devised experiments on the lower animals, those who now practise it may be trusted, in time to come, to prosecute needful inquiries with as much humanity and tenderness as possible. "A great part of their practice is in public; wards full of men and women witness their procedure; and it may be safely stated that in every city and town in the empire, in the army and the navy, no men are more popular with the masses, none enjoy more fully the confidence and respect of the thoughtful, than operating surgeons."

We regard this address as very valuable on account of the precise and trustworthy manner in which it marshals important facts from the records of surgery, and also on account of the strong appeal which it makes to the good sense and candour of many benevolent persons who, from imperfect knowledge, have allowed a praiseworthy interest in the lower animals to outweigh their appreciation of what can now be effected by surgery in the removal and relief of human suffering.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING VI.

Wednesday, 5th April 1882.—Mr Joseph Bell, *Vice-President, in the Chair.*

A letter from Dr Balfour, the President, was read, apologizing for his absence.

I. *Dr Blair Cunynghame* showed a boy æt. 12, suffering from PSEUDO-HYPERTROPHIC PARALYSIS. Along with his brother (æt. 10), he was sent to the Sick Children's Hospital from the south of Scotland, it being supposed that they both suffered from curvature of the spine. Dr Cunynghame regretted that he could not show the brother, as he was suffering from an attack of measles. In the case before the Society the disease was pretty far advanced, symptoms of it having been noticed five years previously. The patient was very weak, and could not raise himself from the ground when thrown down. The walk was very typical, as also the lordosis. The muscles chiefly affected were the gastrocnemii, tensor fasciæ femoris, and infra-spinatus, and, to a lesser extent, the soleus, extensor brevis digitorum, peronei, rectus femoris, and sterno-mastoid. The latissimus dorsi was greatly wasted. All of them acted to the Faradaic current. The patellar tendon-reflex was wanting, but the skin-reflex was normal. The skin was mottled over the affected muscles. Some measurements had been taken of the limbs in the two cases, and contrasted with others taken from healthy boys. The points of measurement were—(1) the circumference round the thickest part of the calf; (2) the circumference midway between patella and anterior superior iliac spine; and (3) at the level of the pubis. These, in the elder brother, were, (1) 12 in., (2) 12⅙ in., (3) 13¼ in. respectively; in the younger, (1) 10 in., (2) 10 in., (3) 11¼ in. respectively; and in two normal cases, (1) 8½ in., (2) 11½ in (3) 13 in. respectively. In the younger brother the disease was little more than commencing, and the mode of raising himself from the ground was very typical in his case. Dr Cunynghame had written to the mother, a very intelligent woman, to ask if she knew of any other instances in the family; but there were none.

II. *Dr Heron Watson* showed an UNDEVELOPED AND UNDESCENDED TESTICLE, WITH THE SAC, which he had removed a fortnight before from a patient over 40. The man had recently begun to suffer pain on the side on which the testicle had not descended. He also felt as if some body was endeavouring to come down at the time the pain was worst. The nature of the case was evident when an examination was made. He was, therefore, advised to submit to the removal of the atrophied testicle and sac, and so have the abdominal serous continuation into the inguinal canal cut off, thereby preventing hernia, to which he was liable in that condition. The operation had been done antiseptically, and the case had gone on well.

III. *Dr Finlay* showed (1.)—THE ARM OF A CHILD he had amputated at the shoulder-joint, secondarily, for traumatic gangrene, the result of an injury. The child had been knocked down by a lorry eight days before the operation had been performed, and the arm was severely crushed by the wheel. In some portions the periosteum was stripped from the bone. The specimen was chiefly interesting as showing a longitudinal split in the humerus at some distance above the fracture, necessitating amputation higher up than at first seemed requisite. The operation had been done by Mr Spence's method, and the case was going on well. (2.) The HEAD AND NECK OF THE FEMUR, removed from a boy æt. 13, suffering from disease of the hip-joint, with a profuse discharge. Ulceration of cartilage, along with disease of the neck, was well seen. Since the operation the patient's temperature had very much improved.

IV. *Dr Miller* showed three small preparations—(1.) A GLANS PENIS AND PREPUCE, amputated for epitheliomatous disease. The affection was not an uncommon one, but he ventured to show the specimen because the cause of the epithelioma—an adherent prepuce—was well seen. The moral was that adherent prepuces should be removed early. The patient had suffered from it from his boyhood. At the time of the operation the inguinal glands were on both sides much enlarged, indurated, and tender, but all irritation had subsided, and they gave no further trouble. (2.) A CYST OF THE ROUND LIGAMENT, removed about two months ago from a young woman. The history was pretty much that of a hernia, sudden pain and swelling in the inguinal region, but this swelling was only partially reducible. He therefore made up his mind that it was not a hernia, and operated for its removal. The patient made a rapid recovery. (3.) A POLYPUS OF THE RECTUM, which, at the time of removal, was as large as an ordinary raspberry, but had contracted till it was now about the size of a dried pea. He had put it in glycerine, thinking that it would contract less in that fluid than in spirits, but it seemed to have contracted more. In 1869 he read a paper on polypi of the rectum, in which he showed that there were three varieties of these tumours—glandular, vascular, and malignant. This specimen belonged to the first of these. It had been removed by the ligature.

V. *The Vice-President* showed A FOOT he had amputated by Mr Syme's method that morning. The patient was a boy æt. 14, on whom he had operated three years before for disease of the os calcis. For more than two years he had done well, but nine months ago the disease returned in the upper portion of the os calcis, the astragalus, and the joint between. The os calcis was larger in proportion than it ought to be, a great deal of new bone being thrown out to supply the place of that removed in the first operation.

VI. *Dr Gibson* showed some TRACINGS of the PULSATIONS OF THE BRAIN, taken from a patient with loss of the substance of the skull in the frontal region, in consequence of a kick given by a horse. The tracings showed the effects on the cerebral circulation of normal and forced breathing, of coughing, and of mental exertion. Dr Gibson stated that he hoped, at some future meeting of the Society, to present a full report of this interesting case.

VII. *Dr Blair Cunynghame* showed the BRAIN from a case of acute hydrocephalus. The convolutions were very much flattened. There were two and a half ounces of serum in the ventricles, and the foramen of Munro was enlarged to admit the tip of the little finger.

VIII. The discussion on Dr John Duncan's paper, AN ACCIDENTAL EXPERIMENT WITH ANTISEPTICS, was then taken up.

The Vice-President reminded the Society shortly of the principal points of the paper.

Dr Miller said he thought it was sometimes an advantage to have a discussion postponed, because they very often had the opportunity of studying the *ipsissima verba* of the paper as published. He had seen and watched with interest both the cases which Dr Duncan used as the text of his paper, and he could corroborate all that had been said. No two cases could be more thoroughly contrasted. After what they had seen, he felt that he would not like to run such a risk in any similar case of sepsis. The risk, he felt, was very great, because, if the abscess-cavity were burst, the irritating fluid and the sepsis were both spread into the cellular tissue, and things were made much worse than before.

Dr Finlay said it had occurred to him that the abdominal abscess from which the septic matter was got in the first instance might not have been affected by germs from the external air, and that therefore the case could not be held to prove that germs float about in the air, although it was clearly shown that the abscess inoculated from it was affected by germs from without. There was no proof that the putridity of the abdominal abscess was due to germs from the external air, and they all knew that there were many abdominal abscesses putrid in which there had been no external opening or evident communication with the air.

Dr Duncan thought it was hardly the proper time, when other important papers were coming on, to discuss such questions as Dr Finlay had raised. He might, however, state that in the primary abdominal abscess there was first a diffuse cellulitis from gangrene of the leg, the patient having refused amputation after a severe railway injury, till he saw the leg black, when he consented. An abscess formed after the amputation, which Dr Duncan opened, hoping it might be a sympathetic abscess free from germs, but which he found to contain bacteria and micrococci, both chains and rods. These had in all probability come from without. The only loophole of escape from this view lay in some experiments made by Rosenburger, in which he found that the products of bacteria, being injected, were able to produce septic mischief in the healthy lower animals. There were a number of curious points in connexion with this inoculation question which he hoped to bring before the Society on a future occasion. Dr Ogston had pointed out that in acute abscesses he had found micrococci chains, but not in chronic. He (Dr Duncan) found, however, that they were present sometimes in chronic abscesses, and absent sometimes from acute; and micrococci as well as bacteria were common in unopened abscesses. Another line of investigation was as to how they came there. Another line, again, was as to the value of the spray. Some experiments recently made seemed to show that it was of little value. It had been found that a considerable surface of sterile fluid might be exposed to the air for a considerable time (within an hour), then shut up and incubated, without showing the presence of germs. He also found, curiously enough, that the time required to make a fluid sterile was proportional to the mass of water. Thus, while it took only twenty minutes' boiling to sterilize the fluid in a small beaker, two hours might be required to do the same with a large one. This seemed to disprove the idea that the character of the germs had anything to do with the time required for sterilization.

IX. *Dr Gibson* read a paper on THE ACTION OF THE AURICLES IN HEALTH AND DISEASE. Discussing the physiology of the auricles, he referred to the advance made by Lauder Brunton and others in bringing forward anew the fact of rhythmic pulsation of the great veins; enunciated the facts regarding the duration of the auricular systole and the measurement of its power; entered into a criticism of the work done by Küss on the action of the auriculo-ventricular valves, and by François-Franck on the normal pulsation of the jugular veins; and referred to the additional views of François-Franck, etc., on the "safety-valve action" of the tricuspid valve. He then described the abnormal conditions of the right auricle, and detailed the facts regarding the venous pulse of the jugular veins in disease. Turning to the left auricle, he stated that the main purpose of his paper was to raise, if possible, a discussion as to the part played by it in the so-called "hæmic murmur" and pulsation at the base of the heart, which still seemed unnoticed or misunderstood. Nannyn had advanced the view that the murmur was due to mitral regurgitation, the blood-current carrying the sound waves into the dilated left auricle, which often also gave a distinct pulsation. Balfour had extended this observation to cases of chlorosis, and shown that in such cases also the basic murmur was of mitral origin. The author had been privileged to add a modicum to our knowledge of the condition by publishing cardiographic tracings which demonstrated that the pulsation in the second left intercostal space followed the apex-beat.

On the motion of Dr Wyllie, the discussion on it was postponed till after the reading of the next paper.

X. A paper by *Dr W. Russell* of Carlisle, on THE MURMURS OF DEBILITY IN THE PULMONARY AND TRICUSPID AREAS, which was down for communication by Dr Brakenridge, was read in his absence, and at the request of the Society, by its author. The sequence of cardiac phenomena in cases of debility was stated to be, first, accentuation of the pulmonary second sound; then a systolic murmur in the second left intercostal space; and, if the case advanced further, the appearance of a murmur in the third and fourth left spaces, accompanied by undulation or regurgitation in the cervical veins. A fatal case of purpura hæmorrhagica was given in illustration of this. The murmur in the second left space was referred to the pulmonary artery; while the murmur in the third and fourth spaces was attributed to tricuspid regurgitation. It was contended that the pulsation and bruit in the second space are not auricular, and a fatal case of pernicious anæmia was given, in which the murmur had been present, and where, at the autopsy, the appendix was so deep in the thorax that the heart had to be turned over to bring it into view; while the upper part of the conus arteriosus extended outwards for two inches in the second space. It was suggested that the pulmonary murmur was due to the fluid veins produced by a relative constriction of the lumen of the artery by the pressure of a dilated auricle; and that the disappearance of the murmur during inspiration was to be accounted for by the elevation of the thorax allowing the resilient artery room to free itself from the pressure behind it. The murmur in the third and fourth spaces was accepted as tricuspid in origin, as it frequently appeared concomitantly with undulation or regurgitation in the veins of the neck, and was accompanied by a diminution in the intensity of the pulmonary second sound, while its *locus* was over the part of the right ventricle which was the first to manifest by its pulsation that dilatation had taken place. The authority of Sibson was claimed in support of the view that this murmur was tricuspid in origin. It was further contended that, while the foregoing was the sequence of events up to a certain point, the murmur in the second space in advanced cases of debility, and in many cases of organic disease at the mitral orifice, was heard over the upper part of the conus arteriosus, and therefore presumably the same as that heard in the third and fourth spaces, and consequently tricuspid.

The Chairman said the Society were much indebted to both Drs Gibson and Russell for their respective papers. He regretted very much that Dr Balfour was not present himself to give his opinion on a subject in which he took so much interest, and regarding which he was better able than any other to speak.

Dr Wyllie fully shared the regret at Dr Balfour's absence. No one could have given a more authoritative opinion on the questions before them that evening. The first paper brought very clearly before them the causation of the venous pulse in the neck. It also showed the effect of the contraction of the musculi papillares, which Dr Russell did not seem to fully appreciate. The two cusps of the mitral valve were pulled closely against the muscular substance during the ventricular systole, so that there could not be propulsion of the blood and distention of the auricle, which Dr Russell seemed to think existed. The points advanced in both papers were put precisely, and were of great interest. As regards the chief point of difference between them, he was afraid that for some little time they must remain in dubiety as to the cause of the basic bruit found in debility. It was not, as they thought formerly, aortic in character. He quite believed that they must refer the bruit either to the auricle or to the pulmonary artery. Which of them, however, is the seat of the bruit? He thought that notwithstanding Dr Russell's precise statements they could not accept what he said without fuller details of his post-mortem examinations. The moment the cavities of the heart were cut into they contracted to some extent, and thus an auricle somewhat distended before incision might be afterwards smaller in size. Nevertheless, apart from the facts, the theory advanced by Dr Russell was one possessed of a good deal of intrinsic probability. The conus arteriosus, he thought, might become enlarged and elongated upwards and to the left. It was also possible that the systolic bruit audible in the same situation might be due to pressure against the conus arteriosus by the auricle. This theory and the auricular theory supported by Dr Balfour and Dr Gibson seemed pretty well balanced against each other. If Dr Russell were correct in regarding this bruit as pulmonary, he (Dr Wyllie) would be inclined to consider it as endocardial, not as frictional or exocardial, as Dr Russell would seem to imply. It was always blowing. It might be more or less rough, but he considered it probable that its occasional harsh character might be due, not to an element of friction, but to the superficial position of the artery. The bruit became softer and less audible during inspiration when the lungs covered the pulmonary artery. To his mind, however, the whole question was still unsettled.

Dr Gibson had little to say in reply. Of the patients whom he had observed and described in previous communications with auricular pulsation, only one, so far as he knew, had died, and he was unable to see the post-mortem appearances in that case. He had seen many autopsies of cardiac subjects, but had never seen anything like the appearances described by Dr Russell, and he was inclined to look upon his cases as entirely different from his own. In his own cases the murmur was clearly mitral, and extended round to the axilla and scapula of the left side.

Dr Russell said the murmurs in the cases he had read in illustration of his views had not been heard either at the apex or the angle of the left scapula, and were therefore not mitral. In reply to Dr Wyllie, he said his observations had not been made by cutting into the various chambers of the heart, but by noting the parts of the heart visible in each interspace, and he had done that by performing the post-mortem examinations with great care, so as not to disturb the thoracic organs. The sternum had been removed in the ordinary manner, and the heart exposed by opening the pericardium, after which the sternum had been replaced and the parts looked at *in situ*.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING V.

Wednesday, 25th January 1882.—Professor Simpson, *President, in the Chair.*

The following gentlemen were elected Fellows of the Society on January 11th:—H. A. Peddie, M.B., C.M.; James Simpson, L.R.C.P. & S.E., Leith; H. L. Calder, M.B., C.M.; Surgeon-Major Wm. Johnston, M.D., Bengal Army; Dr Maslovsky, St Petersburg, as Corresponding Fellow. On January 25th:—T. F. Gilmour, L.R.C.P.E., L.F.P.S.G., Glasgow; H. A. Husband, M.B., F.R.C.S.E., Edinburgh.

I. Adjourned Discussion on Dr Milne Murray's Paper.

The President reminded the Fellows that they had agreed to take up the discussion on the important paper read by Dr Milne Murray at their last meeting. He remarked on the habit or attitude of the child. The head was not only extended, but the arms were thrown backwards. This made it probable that it was a primitive condition. It had been thought desirable to collect the experience of the Fellows on arrested face cases, the treatment adopted, and the result to mother and child. These would be published in a tabular form. He could only speak of two cases, of which the particulars would be given by other Fellows. Such cases raised the question whether we should not always turn, and not use forceps. Turning was preferable, because the pelvis was frequently rickety and the forceps took a bad hold, gripping the neck low down and sometimes producing asphyxia through compression of the phrenic nerves. They were bad cases for turning, however, as the presenting face did not occlude the cervix perfectly, and allowed of ready escape of liquor amnii, so that the uterus closed early and firmly around the child, and it might then become necessary to apply forceps to give the child a chance before proceeding to break up the head.

Dr Croom said that the Society must congratulate Dr Murray on reporting a hitherto unrecorded form of dystocia. It was a primitive face case, but he did not think that the arms were in the backward position during the whole course of the pregnancy, and this because the arms returned to their normal position after the child was born, and because the way in which the child presented made such a displacement extremely probable. It was possible to promote flexion in a face case without passing the hand into the vagina. Having ascertained the position of the chin by abdominal palpation, the chest was pressed back while the occiput was tilted forwards. All the face cases which he had were difficult ones, and he had always to interfere. (See Table.)

Dr Peter Young had had no difficult face cases in his own practice. From the literature of the subject it was evident that the use of forceps when the face was at the brim of the pelvis, was generally followed by bad results. Scanzoni had applied them in five out of eleven cases, with the result that four of the children were born dead, the remaining child dying on the sixth day, and two of the mothers died; in six cases he had turned, with the result that two of the children and none of the mothers died. The best practice was to wait a little and either rectify the position by external manipulation, as Schatz recommends, or by combined manipulation through pushing up the forehead. If these means failed, then turn the child. The forceps were not to be used except when the low position of the head made either of these methods impossible.

Dr D. Berry Hart had listened with great pleasure to Dr Milne Murray's admirably recorded case. In response to the note in the billet asking from the Fellows a short record of their arrested face cases he had received notes of twenty cases, the details of which would be seen in the subjoined table:—

No.	Primipara or Multipara.	Place of Arrest of Face.	Position of Chin.	Treatment, and Result to Mother and Child.	Medical Attendant.
1	Multipara	Brim	Posterior	Turned : child still-born : mother did well	Dr H. M. Church, Edin.
2	Primipara	Brim : generally contracted pelvis	Face transverse : chin to right	Forceps failed : cephalotripsy, and mother died of septicæmia	Dr Halliday Croom, Edinburgh.
3	Primipara	Brim	Chin to right sacro-iliac synchondrosis	Turned : child and mother alive	,,
4	Primipara	At floor	Persistent mento-posterior	Forceps : child dead : mother alive	,,
5, 6, 7	Multipara (3 cases)	Each time a face case		Forceps in first two cases : 3rd occasion, turning : 2nd and 3rd, children alive, 1st, child dead : mother alive	,,
8	Multipara	Brim	At left sacro-iliac synchondrosis	Turned : mother and child alive.	Dr D. B. Hart, Edinburgh.
9	Multipara	Cavity	To right sacro-iliac synchondrosis	Long forceps and crotchet failed : delivered with straight forceps : mother well	Dr J. Jamieson, Edinburgh.
10	Primipara	Brim	To pubis	Forceps and turning failed : craniotomy : mother did well	Dr More, Rothwell, England.
11	Multipara	Brim	Left ilio-pectineal eminence	Restored flexion by bringing down occiput, delivery taking place at once : mother and child did well	,,
12	Multipara	Brim : nine hours in hands of a midwife before seen	Left sacro-iliac synchondrosis	Forceps failed : turned, and extracted a large living child : mother did well	,,
13	Multipara	Just engaged in brim	To pubis : right oblique	Digital dilatation of passages : child born alive and very much bruised	,,
14	Multipara	Outlet	Right foramen ovale	Barnes's forceps : child and mother well	Dr Murphy, Sunderland.
15	Primipara	Perineum	Right sacro-iliac synchondrosis	Left to nature for two hours : then ergot : mother and child did well	,,
16	Multipara	Brim	Face transverse : chin to rt.	Forceps : child dead : mother alive	Dr Milne Murray, Edin.
17	Multipara	Brim : rickety pelvis	To right side	Forceps and very firm pressure above : child dead ; mother died of pelvic inflammation ; child's head much distorted ; vessels of left side of neck ruptured by forceps.	Dr James Ritchie, Edinburgh.
18	Multipara	Entered Brim	Right iliac margin	Forceps : mother and child did well	,,
19	Multipara	At brim : pelvis rickety, conjugate		Axis-traction forceps failed : turning gave living child	Dr T. R. Ronaldson.
20	Multipara	Brim	To left side and anteriorly	Forceps : mother alive : child dead	Dr D. Wilson, Edin.

Some of the points brought out were interesting. Thus in thirteen of the cases the arrest was at the brim, in three the pelvis was deformed, the deformity being that of the rickety pelvis in two at least. The forceps had been applied in nine cases, with the result of one maternal death and six fœtal. Turning had been had recourse to in six cases, with no maternal or fœtal death. Forceps had failed in four cases, and had to be followed by turning or craniotomy. It was noteworthy that in two cases turning had succeeded where forceps had failed. It thus appeared that much better results were got by turning than by forceps when the head was at the brim. One successful case of manual replacement was recorded. Schatz's method of changing face cases into occipital ones by external manipulation was well worthy of a trial. If the displacement of the arms in Dr Murray's case was primary, it would probably have interfered with Schatz's method. It was quite evident that when the face was arrested at the brim and mento-posterior, turning should give better results than forceps. Of course, when the head was fixed at the brim or in the cavity, forceps were requisite.

Dr Milne Murray thanked the Fellows for the reception which his paper had met. In future cases he would always turn. He had found the axis-traction forceps of special service in this case.

II. A paper on A CASE ILLUSTRATING THE IMPORTANCE OF ACCURATE PELVIMETRY, WITH DESCRIPTION OF A NEW METHOD, by *Dr William Turner*, Civil Hospital, Gibraltar, which appears at page 986 of this Journal, was then read.

Dr Hart thought that the method of pelvimetry was a very ingenious one, but it would be difficult of practical application. It was difficult to say whether the point of the callipers was on the promontory, and in many cases the posterior vaginal wall would not allow the callipers to be carried sufficiently back to bring the handle into the line of the conjugate.

Dr Croom thought that an allowance must be made for the soft parts covering the symphysis.

Dr Spence suggested that the arm of the callipers might be passed per rectum.

The President said that the Society was indebted to Dr Turner for his communication. The suggestion was an ingenious one, but he was afraid that the method would be difficult to carry out practically.

III. A paper on A CASE OF PREGNANCY IN A WOMAN OF SIXTY-TWO, by Dr W. John Kennedy, Ilminster, was then read.

Dr Sanderson had heard that the woman was sixty-four years of age. He would ascertain whether this case was the same, and report to the Fellows.

Dr Spence had a case of an unmarried woman who had her first child in her fiftieth year.

Dr Wilson had also a case of a woman who had her first child in her forty-ninth year. She had been married shortly before.

MEETING VI.

Wednesday, 8th February 1882.—Professor SIMPSON, *President, in the Chair.*

The following gentlemen were elected Fellows of the Society:—F. Jelly, M.B., Saughton; J. B. Cunningham, M.B., Prestonpans; C. E. Douglas, M.D., Cupar-Fife; Dr Currie, Sydney.

I. The *President* showed TWO ANENCEPHALIC FŒTUSES, which were born within twenty hours of one another in the Maternity.

II. *The President* read a paper on DYSTOCIA FROM EXOMPHALOS OF THE FŒTUS, where the intestines of the fœtus presented during labour, which appeared at page 873 of this Journal.

Dr Croom thought this paper did not offer much room for criticism, as exomphalos was a very rare occurrence. The Fellows were much indebted to Professor Simpson for the clear statement of the diagnosis and mechanism of such cases.

Dr Peter Young had a specimen of a similar condition in a fourth month fœtus. There was scoliosis of the vertebral column.

Dr Hart said that the feeling of the intestines in the vagina might make one suspect rupture with protrusion of intestine. The fœtal intestines could be diagnosed from those of the mother from their smaller size, and the fact that they were traced into the uterus and not to a rent in the fornix. The head was soft, and difficult to recognise on palpation.

III. A paper on FIBROMYXOMA DUPLEX OVARIORUM (from the clinique of Professor Slavjansky, St Petersburg), by Dr Popow, Pensa, communicated by Dr J. Matthews Duncan, London. It appeared at page 787 of this Journal.

The President said that the Society was indebted to Dr Popow for bringing this interesting pathological condition under their notice. No doubt many cases said to be carcinoma were cases of this; the nodules in the peritoneum and the ascites were common to both conditions.

Dr Peter Young asked what was the condition of the thoracic organs. In leucocythæmia there were usually changes in these. In a case of it in a boy, he noted cheesy deposits in the apex of the lungs and indications of catarrhal pneumonia and bronchitis. There was also pericarditis thrombosis of the vena cava. The spleen was not enlarged.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

MALARIAL FEVER TREATED BY SPIDER'S WEB.—Dr Oliver has established from ninety-three cases of malarial fever the following conclusions:—1. That the spider's web can always cure malarial fever of the daily intermittent or tertian types. 2. That the dose for adults is thirty grains, and for children in proportion. 3. That its action is not so prompt as quinine, and should not be given in pernicious (congestive) fevers. 4. That being more agreeable to the taste than quinine, it is much preferable, especially to children. 5. That relapses are less frequent (*Revista Medica de Madrid*).—*Therapeutic Gazette,* February 1882.

SULPHO-PHENIC ACID IN YELLOW FEVER.—Dr Declat writes from Paris that two young ladies were cured at Rio Janeiro of yellow fever by subcutaneous injections of phenic acid and of ammonia, and of sulpho-phenic acid. After thirty years' experience with yellow fever, these were the first patients cured which I am certain were cured from a severe attack of the disease. Dr Lacailel has also cured twelve others by similar treatment. At a time when the yellow fever at Vera Cruz is so fatal, and against which the old treatment is impotent, it is desirable to have this new treatment put in operation (*Indepencia Medica*).—*Therapeutic Gazette*, February 1882.

CROTON-CHLORAL HYDRATE IN FACIAL NEURALGIA AND HYSTERIA.—Dr C. J. Fox (*Medical Bulletin*) says: For some time past I have used with special efficacy croton-chloral hydrate in nearly all the cases which have recently come under my observation of facial neuralgia (some seventeen in all), and my experience in successfully treating the affection by means of the drug have led me to give the results of my observation to the profession. I generally prescribe a full dose in this class of cases:—℞: Croton-chloral hydrate, ʒij.; Glycerine, ℥ij.; Aqua fontana, q. s. ℥iv. M. Fiat solutio. Sig., ʒj. ter. in die. In ordinary cases I give a teaspoon ful three times a day. If the symptoms are quite urgent, I give a teaspoonful every two hours until the pain is relieved. In hysteria, especially when convulsions come on, it is specially valuable. My opinion is that the drug in small doses produces first anæsthesia of the head before the rest of the body is affected. In large doses the hypnotic effect is marvellous. Suffice it to say, its beneficial value is to be seen in all painful affections of the head. In just such cases

I have observed its efficacy as a therapeutic and remedial agent. Permit me to add, its primary action is clearly marked in producing anæsthesia of the head, and only after this does its influence extend to the organs of the body. Finally, its true value can only be weighed, not by ordinary experience, but by the general verdict of the profession (*Medical and Surgical Reporter*).—*American Medical Digest*, February 1882.

THE OIL OF D'ANDA-ASSU AND OF LA JOHANASEINE.—D'anda-assu, of the class *Crotonees* of the family of *Euphorbiaceæ;* of the genus *Johanesieæ princeps;* in different parts of Brazil it is known under the name of coco purgatif. It is a tall, beautiful tree, with branches opening to the sun, with fruit six to eight centimetres long. M. Oliveria of Rio Janeiro has analyzed the juice of the tree, and has given it the name of Johanaseine. This substance is slightly soluble in water and in alcohol, and is soluble in chloroform, benzine, ether, and sulphide of carbon. Dr Corety conducts his experiments with the preparation of M. Oliveria, but, contrary to the opinion of many Brazilian physicians, finds that this salt has no poisonous effects. As to the oil, Dr Jones, Professor in the Faculty of Rio Janeiro, experimented on a patient having cirrhosis of the liver. The dose, two teaspoonfuls, produced six alvine evacuations. Several other physicians obtained excellent results. Dr Castro concludes as follows: 1. That the purgative effect of D'anda-assu is obtained in three or four hours, and with several evacuations. 2. That it produces no intestinal irritation. 3. That it can be employed in all cases where castor oil is used, over which it has advantages: *a.* That the dose is one-third less; *b.* That it has no repugnant odour, like castor oil; *c.* That it does not adhere to the mouth, as castor oil does; *d.* That one grain of the oil has ten times the strength of castor oil (*Arct. de Rio Janeiro; Journal de Therapeutique*).—*Therapeutic Gazette*, January 1882.

SALICYLIC ACID TREATMENT CONTRASTED WITH OTHER REMEDIES IN THE TREATMENT OF ACUTE RHEUMATISM.—The following observations are based upon 90 cases of acute rheumatism, 35 (uncomplicated) having been treated by remedies in use before salicylic acid, 55 treated by salicylate of soda or ammonia. The circumstances of the cases are alike in all. I compare the two groups, (1) with reference to the number of hours occupied by the temperature in dropping to 99°; (2) with reference to the respective stay in hospital. 1. In 35 cases treated by various remedies (uncomplicated), the average number of hours occupied in the temperature falling to 99° was 248; the extremes, 12 and 1056 hours. The average stay in hospital (27 cases) was 39 days. 2. The cases treated by salicylate salt must be subdivided into (*a.*) 43 cases in which the remedy acted successfully, and (*b.*) 12 in which it failed; but, as in 4 the failure probably resulted from imperfect administration, the number of failures must be reduced to 8. (*a.*) In 43 successful cases the average number of hours in temperature reaching 99° (39 cases) was 38; the extremes were 6 hours and 72. In 16 cases it was 30 hours or fewer. The average stay in hospital (37 cases) was 38 days; the extremes, 10 days and 138. The reduction of the local symptoms, particularly of pain and heat, generally kept pace with the decline of temperature, or even anticipated it. In 20 cases it is expressly stated that the relief of pain was effected within 24 hours. The same thing probably occurred in others. In 4 it began with the first dose. Hence, whilst the average residence in hospital was hardly lessened by the salicylic acid, the period was passed in comparative immunity from the symptoms of the disease. The duration of residence was determined by relapses, and also by the need of caution in guarding against their occurrence. Of the 43 cases of successful treatment, a relapse occurred in 11, a second in 4. In all the relapse was brief and speedily controlled. The duration of the salicylate treatment strikingly attests the varied character of the disease. Taking 22 cases in which no relapse had occurred, the number of days during which the remedy had been given varied between 2 and 17. In 2 cases of relapse the salt had been taken for 19 days. (*b.*) In 8 cases the remedy failed. They were severe. The average residence in hospital (6 cases) was 75 days. One death occurred. Four patients were abnormally neurotic. *Accidents.*—Of the 55 cases in which the salicylate salt was given, vomiting occurred in 9, chiefly after doses exceeding ten grains. Delirium occurred in 6; in 2 it was protracted, but was free from alarming element; in 1 it was followed by death. Two deaths have occurred whilst the patient was taking the medicine. One was in a boy aged 15, of weak intellect, who had been taking ten grains every four hours with great relief, and without any sign of disagreement except slight vomiting for six days. After screaming through the night without apparent cause, he died suddenly in the morning; temperature 99°·6. The lungs were highly œdematous and much congested. The right auricle was gorged with blood. In the second case a man of nervous temperament had taken ten grains every two hours for two days without relief. The dose was then doubled, and two days after was raised to 25 grains. The rheumatism was relieved, and the dose was lowered to 12 grains on the same evening, and to 8 on the following morning. He had been depressed and delirious through the night. The delirium continued severely through the day, and he died suddenly in the night, the temperature, which had sunk to 100°, rising to 111°·5 immediately before death. The right side of the heart was moderately full of dark, tarry blood. Considerable ecchymoses under the serous membranes. Among the 43 successful cases are 5 of pericarditis, in all slight, but of brief duration. In 3 it preceded the remedy; in 1 it was discovered on the day after commencement; in the fifth case severe, and ultimately fatal, pericarditis set in three days after the rheumatic symptoms had been removed by the salicylate (by James Russell, M.D., F.R.C.P., Physician to the Birmingham General Hospital).—*British Medical Journal*, 1st April 1882.

Stigmata Maidis in Retention of Urine.—The well-known suppression of the urinary secretion, as well as the inhibition wrought upon the contractility of the organic muscles, consequent upon the prolonged exhibition of opiates, are often serious difficulties in the treatment of grave diseases. In a recent case of prolonged and dangerous dysentery the employment of the opiates greatly diminished the secretion of urine, and also interfered with the expulsion from the bladder of what was actually present. In this predicament of my patient—a young lady—I found the stigmata of maize to answer an excellent purpose. The fluid extract (P. D. & Co.'s) was administered in drachm doses every six hours. After twelve or fifteen hours the unpleasant complication entirely disappeared, although the urgency of the primary disease forbade any intermission of the opium treatment. The medicine promises to be of great value in all such cases (by T. M. Wright, M.D., Bellefontaine, O.)—*Therapeutic Gazette*, February 1882.

Dr Dupré on Jaborandi or Pilocarpine.—In his communication to the Montpelier Society, after experimenting clinically in that city, Dupré concludes that jaborandi and its active principle pilocarpine are useful in diseases of the skin, mucous and serous membrane, and of the glandular system. It is one of the most active therapeutic agents, and renders incontestably good service in acute articular rheumatism, in catarrhal affections, in pleuritic effusions, etc. The activity of these medicines is greater in the decline than in the beginning of acute diseases, and often powerless and dangerous in the latter stage. They are superior to the acetate of ammonia, to aromatic infusions or tinctures, to hasten the eruptive stages as to stimulate those slow in breaking out. The author cites a case of variola in which the eruption was slow in appearing, but was hastened by jaborandi, and the cure a speedy one, with subcutaneous injection, and, contrary to the views of Vulpian, two to three or four centigrammes in three or four grammes of water. Large doses are necessary for successful treatment (*Montpelier Medicale*).—*Therapeutic Gazette*, January 1882.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

The Removal of Foreign Bodies from the Ear.—Dr Roosa begins his highly instructive lecture by stating that the general practitioner is more likely to see cases of foreign bodies in the ear than is the specialist. Then, enumerating some of the bodies which children are apt to insert into their ears, sometimes becoming very much alarmed on finding they cannot remove them, he speaks of the almost ludicrous certainty of this alarm being communicated to the minds of the nurses, parents, and even to the mind of the family physician. This alarm is usually entirely unnecessary. A foreign body in the auditory canal, unlike a foreign body on the cornea, or in the conjunctival sac, or in the eye, is a very harmless thing if properly treated. Even delay is not dangerous. It is true that a foreign body which has passed the auditory canal and entered the tympanic cavity is dangerous; but even then its danger as regards life is infinitesimal if only it be left alone. The worst consequences usually are loss of the middle portion of the ear, and consequently of all acute hearing power. After speaking of a class of foreign bodies not so frequently met with in our temperate as in more tropical climates, viz., insects and maggots in the ear, he goes on to advise his medical audience not to share in the excitement of the friends of the patient brought with a foreign body in the ear; and, secondly, never to believe that there is a foreign body in the auditory canal unless we have seen it with our own eyes, if we are to be the person who is to remove it. Do not probe the meatus to ascertain the presence of a foreign body. How are we to examine the auditory canal supposed to contain a foreign body? Of course, by means of the speculum and mirror. We may not have such appliances at hand, but a lady's handglass, a piece of broken mirror, or a toy glass, any highly refracting surface easily handled, with a piece of white pasteboard rolled in a small funnel-shape like a speculum, and a good source of illumination, suffice. Having once determined the presence of a foreign body in the auditory canal, and if it has not been meddled with, our task is sufficiently easy. A few uses of the syringe, without frightening the little patient, without causing any discomfort, will remove it. Dr Roosa, in a well-worded paragraph, points out the dangerous tendency the recent writings of some *specialists* have, who deprecate the use of the syringe and advocate the employment of forceps, scoops, snares, and other ingenious extractors, in regard to which Von Troeltsch writes:—Injuries are frequently inflicted on the soft parts of the meatus by patients themselves with an itching in the ear using knitting-needles, pins, or sharp metal ear-picks; but graver and more frequently serious are the contused and lacerated wounds of the auditory canal inflicted by a professional hand in attempting the removal of foreign bodies, even in those cases in which most harmless intruders, as morsels of bread and paper, are concerned. . . . On such occasions the instrumental foreign bodies are generally the chief part of the evil. Nothing can be more cleanly, nothing more harmless, than a stream of pure warm water from the mouth of a syringe directed along the walls of the external auditory meatus beyond the foreign body so that the returning wave shall sweep it out. Where injury has been done to the soft parts, or even when the foreign body has been pushed through the membrane into the cavity of the tympanum, delay will do no harm. We can allay the consequent irritation, pain, and swelling from the unfortunately inflicted injuries by applying warm, soothing, and cleansing fomentations. Even gentle tepid syringing may of itself, in a short time, bring about the desired result. Should instrumental interference be absolutely necessary, the patient must be anæsthetized, and a good steady light, by means of the frontal mirror, thoroughly illuminate the meatus and parts to be dealt with, and the operator should have sufficient skilled assistance and instrumental aid at his command, whilst possessing a good anatomical and surgical knowledge of the ear and its surroundings (by D. B. St John Roosa, M.D., LL.D., Professor of Ophthalmology in the University of the City of New York and of the Eye and Ear in the City of Vermont).—*The Medical Record*, vol. xx., No. 24, 10th Dec. 1881, p. 645.

Pyæmia from Otitis.—Dr Walter Smith showed the left petrous bone, cerebellum, and lungs of a young man, aged 21, who had enjoyed good health until 23rd December 1881, when severe pain suddenly set in in the left ear and left side of the head. Next day there were rigors, sweatings, and vomiting. The patient was admitted to Sir P. Dun's Hospital on 1st January. There was no history of any discharge from either of his ears. The temperature ran a completely typical course; on one occasion it fell to 96°·7 Fahr., on another it rose to 107°·4 Fahr. There was a similar want of accordance between the pulse and respiration records. There was a complete absence of any paralytic symptom, general or special. The sputum was rusty and streaked with blood, but physical signs of pneumonia were not discovered until 9th January. The cerebral symptoms then became latent. Examination showed bulging of the left membrana tympani, but there was no perforation or otorrhœa. After increasing dyspnœa, death ensued on 15th January. The spleen was large and pulpy; it weighed 10½ ounces. There was some left pleural effusion; foci of embolic pneumonia were found in the left lung. The right lung was tough, non-crepitant, and in places quite gangrenous, with several softening embolic pneumonic patches. Necrosis of the pleura was well marked on the surface of the lung. A small greenish abscess was observed in the cerebellum, below the left corner of the pons varolii. A thrombus lay in the left lateral and superior petrosal sinuses. The left petrous bone was diseased and very fœtid. The cavity of the tympanum was full of brown grumous stuff, and its roof was broken down and perforated.—*British Medical Journal*, 25th February 1882, page 272.

Disease of Ear and Abscess of Brain.—Mr A. O. Holbecke showed the left hemisphere of the brain of a child, aged eight years, exhibiting a large abscess cavity from which about half a pint of most offensive pus had escaped. On making the post-mortem examination, a small round perforation in the petrous portion of the temporal bone was found, which communicated with the ear on the one hand and the abscess cavity on the other. The dura mater was healthy. Thirteen weeks before death the child received a blow on the ear, and complained of much pain at the time. Subsequently her health became impaired, and a discharge of pus from the left ear appeared, the pain in the head becoming relieved. Several times the discharge disappeared, the pain in the head being always simultaneously increased. There was no paralysis. Convulsions had occasionally occurred. She was rational, and answered questions intelligently. Twelve hours before death the discharge from the ear ceased, and she at once became comatose and died.—*British Medical Journal*, 4th March 1882, p. 308.

THE ALCOHOLIC TREATMENT OF AURAL POLYPI.—Professor Politzer, in an article on this subject in the *Wiener Med. Wochenschrift,* says that the efficiency of the alcohol treatment is very marked in granular or polypoid growths situated in the external auditory meatus, in the tympanic cavity, or on the membrane itself. He commences by evacuating the pus, and then cleansing the parts by injection of tepid water. By means of a wad of cotton, the portion of fluid remaining is removed. This done, and the head of the patient being inclined to one side, the alcohol, slightly warmed, is poured by a spoon into the external meatus, and is kept there for ten or fifteen minutes at least. The instillation of the liquid generally causes simply a sensation of warmth, rarely a sharp pricking or heat; this is always of very short duration, and only occurs in the early days of the treatment. In the case of great pain the alcohol is diluted with its own volume of distilled water. The instillation should be repeated three times a day. After a certain time, if the regression of the morbid growths allows it, two, and finally one instillation a day may be made. Immediately after the application of the alcohol the granulations or polypi, which were of an intense red, become pale and grayish-red. This is owing to the coagulation of the mucus and albumen. Later, the contents of the vessels in the superficial layers coagulates in its turn, which causes retraction of the tissues. The action of alcohol is independent of the structure of the morbid growths. Fibromata contract and disappear as surely, though more slowly, than round-celled polypi. The author cites numerous cases treated with success. In many cases the action of alcohol is rapid; most often, however, the neoplasms only disappear after weeks, or even months, of regular continuous treatment. The practitioner should remember this fact, so that he may not abandon the alcohol treatment because after some weeks cure has not taken place. The following, according to the author, are the indications of treatment by rectified alcohol:—1. The remains of polypi in the external meatus, on the membrane, and especially in the tympanum, which cannot be extracted by operation. 2. Multiple granulation in the external ear and on the membrane. 3. Diffuse and considerable proliferation of the mucous membrane of the middle ear. 4. Polypi of the external meatus, which, owing to mechanical obstacles, cannot be removed with instruments. 5. In persons who dread operations, and in children, in whom operation is always difficult, and can very often only be practised in cases of necrosis.—*The Specialist*, 1st October 1881, p. 34.

TREATMENT OF OTORRHŒA.—Dr Brieson advises, in the treatment of otorrhœa, the instillation into the ear diseased, five times daily, of a few drops of a mixture thus composed:—Hydrate of chloral, 45 grs.; sulphate aluminus, 70 grs.; water, 3 oz. In all the cases cited by the author these instillations have healed the otorrhœa, if not the deafness, in a few days, where no osseous lesion was present. General constitutional treatment is also advised, to prevent a relapse (*Med. Press. Circ.*)—*The Specialist*, 1st October 1881.

THE EFFECTS OF SYPHILIS ON THE EAR.—In a paper on "Deafness as the Result of the Poison of Syphilis," reprinted from the Philadelphia *Medical and Surgical Reporter*, Dr Laurence Turnbull, after considering the history, pathology, prognosis, and treatment of syphilitic aural affections, draws the following conclusions:—1. That syphilitic diseases of the ear are less numerous in the United States than in Great Britain or Europe, and that they are not so frequently a cause of deaf-muteism. Yet there are cases of this affection. 2. In almost all constitutional syphilitic disease of the ear in children and young persons, it is associated with some disease of the eyes, throat, and nose. The deafness which often follows the improvement in the eyes is sometimes profound. 3. Persons who have suffered from constitutional syphilis, especially young persons and children, have great impairment of the hearing tones through the bones of the head. 4. In a few cases the first indication of syphilitic diseased ear is a primary ulcer in the throat, naso-pharyngeal space, or in the auditory canal, or near the membrana tympani. 5. Purulent otitis media, or otitis media serosa syphilitica, may occur in utero or very young infants; while in young persons and adults we may have congestion of the tympanic mucous membrane from the same cause, anchylosis of the bones of the ear, with bands of adhesion in the middle ear, by extension from the throat to the Eustachian tubes. 6. Syphilitic disease may affect the most vital part of the internal ear, labyrinth, semicircular canals, and cochlea, with marked thickening and dryness of the membranes of the round and oval windows and vessels which supply the internal ear. There is also disease of syphilitic nature in the auditory nerve, also the brain itself, in the formation of disseminated small nodules within the nerve centres.—*The Specialist*, 1st October 1881.

M. Boucheron lately made a communication to the Medical Section of the Paris Academy, in which he expressed an opinion that the coexistent states of deafness and dumbness so often observed is owing to the compression of the acoustic nerve. This compression is the result of the vacuum existing in the cavity of the tympanum. This vacuum causes the external air to press on the membrane, and thus on the ossicula, and finally on the liquid of the labyrinth and the nerve. By frequent insufflation into the Eustachian tube M. Boucheron succeeds in destroying the vacuum and thereby the pressure on the nerve, and deafness is cured. M. Boucheron has restored, in some cases to the apparently deaf and dumb, and even idiots, the faculty of hearing and of speech.—*Brit. Med. Jour.*, 18th March 1882, p. 398.

THE TEACHING OF AURAL SURGERY.—The question of the efficient teaching of the various specialities is one which is attracting attention. It was therefore with great pleasure that we noticed that Dr Pritchard, in his able address to the subsection of Otology at Ryde, called special attention to the point, and spoke of the lamentable ignorance and contempt of the average practitioner for aural surgery. The belief is still too prevalent that science can do little for ear diseases, and that aural surgery is not much better than quackery. The work of those who have pursued otology in the true spirit of scientific surgery, such as Toynbee, Hinton, Wilde, Trœltsch, Politzer, Gruber, Roosa, Burnett, Turnbull, and many others, is now, however, beginning to bear fruit. Aural departments have been established at most of our clinical hospitals, and courses of lectures instituted at the medical schools. Still, however, the student knows that it is purely optional with him whether he attends these departments or not. He will not be asked any questions on aural pathology or surgery at his examinations, and beyond these he rarely looks. He goes into practice, therefore, never, perhaps, having seen a membrana tympani, quite ignorant of how properly to syringe out an ear, and not having the faintest notion of what is meant by Politzer inflation. It is time such a state of things was altered, and that students should understand that it is at any rate possible a question on aural surgery may be asked at the pass examination. A step in this direction was made at Ryde by the unanimous adoption of resolutions to the effect—1. That a committee should be appointed to consider and report on, at the next annual meeting of the Association, the best means of promoting the study of aural surgery, especially in regard to compulsory examination in this subject by the various examining bodies. 2. That the committee consist of the chairman and honorary secretaries of this subsection, and (with their consent) of all the teachers of otology in the United Kingdom, with power to add to their number. The committee having met, after several meetings where many suggestions were received and discussed, has arrived at the conclusion *that all* *candidates for admission into the profession should have a practical knowledge of at least the essentials of otology.* "The committee, therefore, earnestly recommends that you will request all the examining bodies to include aural surgery in their examinations, placing it on the same footing as ophthalmic surgery, and that you will further draw their attention to the especial importance of a practical examination in this subject."

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

On Urticaria Perstans.—Pick points out that the view taken by Hebra and most of his followers of a chronic urticaria was one in which wheals, each of short individual duration, continued for an indefinite period to appear. There are, however, two forms of "stationary nettlerash." In the first, in addition to the hyperæmic tint which accompanies the formation of the wheals, there is no further pigmentation of the skin of the affected parts; while, in the second, lasting discoloration of the skin remains for a long time after the injection has faded. Willan seems to have had the first form in his mind when he described his urticaria perstans, but Pick has not found any allusion to it in later works. In it a reddish macule remains visible for some days after the disappearance of the wheals. This probably is connected with the hyperæmic injection, which occasionally lasts longer than the wheal. He relates three out of five cases he has met with. The ages of those affected were, sixteen, twenty-five, and fifty-three. Two cases of the second form are also related. These correspond to urticaria pigmentosa as described by Morrant Baker, Sangster, etc. One was in a girl of eight, in whom it had existed since she was six weeks old. The other was in an infant aged seven months, and the disease began a few days after birth. A portion of one of the wheals, with the pigmentation, was cut out in this case, and sections examined microscopically. Little hæmorrhages were found in the cutis, surrounded by small-celled infiltration of the areolar tissue. In most cases there is more or less swelling of the lymphatic glands, which leads to the conclusion that disturbances exist in the current of the lymph stream which renders absorption slower. Chronic urticaria, then, is that form in which evanescent wheals appear anew during months and years; urticaria perstans where the wheals themselves persist long; and urticaria perstans hæmorrhagica where, in addition, there is pigmentation.—*Zeitschrift für Heilkunde,* Prag., January 1882.

Observations on various Forms of Superficial Dermatitis.—Dr Pye Smith contributes to *Guy's Hospital Reports,* 1881, a most thoughtful paper on this subject. Under erythema he makes mention of that form which resembles chilblains, to which Mr Jonathan Hutchison had already directed attention. The livid, swollen, pernio-like patches occur apart from cold, have often a different localization from chilblains, and pursue a more rapid course. Small, thin-walled bullæ at times form on them. There may be similarly "flushing" of the cheeks, an erythematous blush with or without a bleb on its surface. In one such case the local application of collodion stopped the progress when threatened by premonitory flushing and tingling of face. Under eczema he draws attention to a form which attacks the lips, usually in children and young girls. From the thinness of the skin of the prolabium, hæmorrhage easily takes place; hence the crusts are brown or black, and massive. The best treatment is removal of the crusts with bread poultices, and subsequent application of an ointment composed of equal parts of ung. zinci, ung. plumbi acetat., and ung. hydr. nit. The patients are often pale, and are benefited by steel. As to its nature, he considers the condition which we call eczema one of ordinary inflammation of the Malpighian and papillary layers of the skin, not "constitutional" or "diathetic" any more than inflammation of the kidneys or of the stomach. The differences between individuals as to liability to eczema lies in the anatomical structure (hereditary or otherwise acquired) of their skins. As general rules for its local treatment we must relieve the inflamed skin from the friction of the clothes, and as much as possible from that of movement; we protect it from air by rags soaked in lotion, or by smearing it with unguent, or by dusting it with an indifferent powder; and thirdly, we must protect it from water, or rather from the change from moist to dry by evaporation, which is the result of washing, all irritants to living tissues, mechanical, chemical, or what not, and more or less sudden changes. It is the rapidity of a change, not its amount, which acts as an irritant, whether in the normal or morbid department of physiology. What we want to procure is uniformity of condition. As to lotions and ointments, the general rule laid down by the late Dr Hughes Bennett is an excellent one—lotions to wet, and ointment to dry eruptions. Again, lotions are indicated in hot weather when the skin sweats freely, and ointments in winter when there is no fear of their turning rancid. The intertrigo of infants and of the breasts in women is often quickly relieved by first cleansing with white of egg, carefully drying, and then powdering with oxide of zinc. Besides external applications for the relief of itching, sedatives, especially in children, are needed at times to secure rest for the inflamed skin at night. Opiates are undesirable, not only on general grounds, for children, but also because they occasionally aggravate pruritus. Henbane is better, and, combined with camphor as a pill or a draught, often seems to suit old men better than any other hypnotic. Chloral hydrate is particularly adapted to children, and is best given to infants alone. With older children and adults bromide of potassium and chloral hydrate make the best combination. In obstinate cases of eczema of the hands the following method is almost always successful:—wash them thoroughly, removing all crusts, secretion, and dead epidermis, and cutting the nails short. Then rub vaseline gently in all over, put on a well-fitting pair of kid gloves, and keep them on night and day, only removing them for applying fresh vaseline. Under the head of diet, most children suffering from eczema benefit from a meat diet, and some of them by the addition of stimulants. The paper also contains much interesting information on psoriasis, which he regards as purely an affection of the skin, on lichen, prurigo, and dermatitis exfoliativa.

THE HISTOLOGY OF MOLLUSCUM CONTAGIOSUM.—Thin, from an examination of twenty of those tumours, concludes that the disease depends on the development in the cells of the epidermis of a new substance, of the nature of which we are as yet ignorant. This development begins in the first instance in the hair follicles, between the root-sheaths and the shaft of the hair, but soon takes root amongst the cells of the free surface of the epidermis which surrounds the follicle. It is attended with a continuous growth of epidermis downwards into the cutis, the successive layers of newly-formed cells becoming successively the seats of the specific change. He does not believe that these tumours are connected with the sebaceous glands, for they have no ducts, and the cells contain no sebum. The cells of the growth have the ordinary spikes or prickles characteristic of epidermic cells. [We have not been able to satisfy ourselves of this. None of the cells of the molluscum tumours of which we have sections bore spines, although the cells of the mucous layer lying above the tumour were provided with their characteristic prickles. Dr Thin has not explained in his paper how a thin layer of corium covers the molluscous growth, or why we can squeeze a milky fluid containing the so-called molluscum corpuscles from an opening like a duct in the larger or pedunculated growths.—W. A. J.]—*Reprint from Pathological Society of London's Transactions*, 1881.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. MILNE CHAPMAN, M.B., M.R.C.S.

IODOFORM IN GYNÆCOLOGICAL PRACTICE, by Dr Frank P. Foster, (*New York Medical Journal and Obstetrical Review*, March 1882).—This paper consists of some clinical notes on the use of iodoform in gynæcological practice, especially in pelvic peritonitis and cellulitis of a chronic form. The cases are classified according to the abnormalities ascertained to be present: 1. Cases in which inflammatory action was supposed to exist, or to have existed, but in which the uterus was freely movable without pain. 2. Cases in which the mobility of the uterus was but slightly if at all impaired, but in which motion of the organ was painful. 3. Impaired mobility of the uterus, with little or no pain on moving it. 4. Mobility of the uterus decidedly impaired, with pain on moving it. 5. Uterus nearly or quite immovable, with little or no pain on attempting to move it. 6. Uterus nearly or quite fixed, with decided pain on attempting to move it. 7. Cases of palpable inflammatory deposit. The most prompt and satisfactory results were obtained in the last group of cases—those of palpable pelvic exudation. Such cases, however, do better, according to the author's experience, under the more usual methods of treatment than those in which the exudation is not capable of detection by palpation, but is inferred to be present from conditions that can scarcely be explained on any other theory. But while such is the case, it is quite as true, he remarks, that we now and then meet with bulky exudations that prove utterly rebellious to treatment. A good deal depends, no doubt, upon whether the deposit is of recent or of remote formation; and this question it is not always easy to settle in the cases of patients of whose past history we know nothing beyond what we may be able to elicit by questioning them. Taking the seven groups together, it seems to him that the patients progressed more satisfactorily, on the whole, than they would have done without the use of iodoform. It is true, he adds, that in the great majority of them the use of vaginal injections of hot water was prescribed, but it is no less a moral certainty that in many instances they were neglected by the patients. Their proper use being assured, he would esteem the three great remedies for chronic extra-uterine pelvic inflammation in the following order: (1) hot water, (2) iodoform, (3) galvanism. As to the best method of using iodoform in such cases, his preference is for its application to the upper part of the vagina, and his practice is to tampon the whole vaginal canal with wicking. This prevents the application from being washed away with the discharge, and the tampon is often of great service by its mechanical action—steadying the uterus, sometimes exerting a gentle, even distention upon the deposit, and perhaps inducing muscular contraction. These tampons are almost always borne without pain or discomfort, and, from the fact that iodoform is an antiseptic, they may be retained for several days. His custom is, however, to direct their removal at the end of thirty-six hours. Not the least of their merits is that they effectually shut in the abominable odour of the drug. Used in this way, he has never known iodoform to betray the patient by its odour, although its taste is sometimes complained of immediately, showing that the substance occasionally makes its way into the uterine canal, or else is absorbed by the vagina more promptly than we are accustomed to expect in the case of medicaments introduced into that passage. For occasional use as an anodyne; in acute cases, in which the patients are not likely to be asked embarrassing questions by strangers, and in which, as well as in cases of vulvar hyperæsthesia, it is an object to avoid meddling with the genital canal; also with patients who cannot have continuous treatment by the physician himself, the employment of rectal suppositories is a valuable resource.

THE USE OF IODOFORM DURING THE PUERPERIUM, by Dr G. Bayer (*Centbl. f. Gynäk.*, No. 10, 1882).—In this paper the writer criticises the paper by Mann referred to in last month's retrospect, and advises, as a safer, cheaper, more efficacious, and less objectionable application, salicylic acid and starch, 1–5, blown into the vagina after careful washing with weak Condy's fluid, a method which he employs in the lying-in hospital of Stuttgart with good results.

THE USE OF IODOFORM AS A DRESSING FOR WOUNDS, by A. Schücking (*Ibid.*, No. 13).—After all gynæcological operations the writer washes the vagina out with 1–20 carbolic lotion, and then places in it about a drachm of iodoform, which is washed out on the third day, after which daily douches are employed. In one case of laparotomy he rubbed iodoform on the stump and on the wound surfaces, leaving in all about a drachm in the peritoneal cavity, with the best results. In another case of empyema after resecting a portion of rib, he put into the pleura over half an ounce of the powder, and then introduced a drainage-tube. The case was cured in three weeks.

(Two other papers on the use of iodoform will be found in the *Centbl. f. Chirurgie*, one in No. 48, 1881, by König of Göttingen; the other in No. 1, 1882, by Mikulicz of Vienna.)

THE DISINFECTION OF THE VAGINA AFTER OPERATIONS, by Dr H. Schmid, Berlin (*Ibid.*, No. 11).—The method employed is to introduce into the vagina, after thoroughly drying the walls, about 3 drachms of powdered salicylic acid, by means of an ordinary female glass syringe through a speculum, the two being simultaneously withdrawn. This may be left in for from one to four weeks, then syringed out, and a second application made if necessary.

APPARATUS FOR THE REMOVAL OF FLUIDS BY PERMANENT IRRIGATION, by Dr D. v. Ott, St Petersburg (*Ibid.*, No. 12).—PERMANENT IRRIGATION OF VAGINAL WOUNDS, by A. Schücking (*Ibid.*, No. 13).—The method recommended in the first paper involves the use of a bed-pan, which is dispensed with by Schücking, who fills the vagina with a sort of double Fergusson's speculum with a stopper in the external end, through which two tubes are passed, the one attached to the catheter, the other forming an outflow. Figures and full descriptions of the apparatus will be found in the original.

CASE OF CLITERODECTOMY, by Dr George Englemann (*American Practitioner*, January 1882).—The writer thinks the operation has fallen into undeserved disrepute, and advocates its performance in certain cases. His justification for the operation is based upon a recognition of the importance of reflex action in female suffering. He gives a complete record of one case (the only one he has ever seen), in which a lady, fifty-two years of age, was placed under his care for the following condition:—She had always suffered much from headache, and was very nervous, easily flushed by worry or excitement. She had had eleven children. Menstruation had always been regular, but profuse, until about six years ago, when, after eighteen months of irregularity, it ceased altogether. She complained of nervous attacks, originating sensibly in the region of the clitoris, and culminating in melancholia. All the symptoms of the attack evidenced a profoundly nervous condition and great derangement of the general health. After lasting a variable period, these symptoms would suddenly disappear, and she would have two or three weeks of comparative comfort, followed by a fresh attack, this state of matters going on until life became a burden to her. Examination revealed an irritated vulva, carunculæ myrtiformes, and very much enlarged nymphæ and clitoris. He removed the carunculæ, and subsequently amputated the clitoris and nymphæ. The patient made a good recovery, and while under his care was entirely free from bad symptoms. Some months afterwards, however, when she had returned home, the old attacks came back with full force, but Dr Englemann attributes this relapse to a return to her old habit of masturbation, which, of course, the presence of the nurse had prevented. The question, therefore, arises, whether her nervous attacks were due to the enlarged clitoris or to masturbation.

THE SURGICAL ASPECTS OT GYNÆCOLOGY, by Dr Hunter, New York (*N. Y. Med. Jour. and Obstet. Review*, February 1882).—The scope of this paper—which is to great extent clinical—may be gathered from the following conclusions:—1. There appears to be no good reason to suppose that those who practise gynæcology are less competent than others to judge of the necessity, in any given case, of resorting to surgery. 2. Those who deprecate the surgical resources of gynæcology are not those whose studies or opportunities entitle their opinions on this particular subject to great weight. 3. The foundation of modern gynæcology is surgery—modern surgery, with all its improvements, and with all the advantages it derives from the antiseptic system. The triumphs of gynæcology have been gained almost entirely in the field of surgery. 4. To those who still doubt the value of surgical procedures which seem to the "inner circle" amply proven, I would reply by a quotation from Dr Van Buren, who says, with exquisite courtesy, speaking of an operation about the value of which he has no doubt, but which is subject to the opposition of inexperience, "I cannot help thinking that those who speak unfavourably of this measure may not have fully tried it."

TRACHELORAPHY, OR EMMET'S OPERATION.—The following abstract from the proceedings of the London Obstetrical Society at the meeting on 1st March will be interesting as showing the state of information regarding this operation, and the estimate of its value, on the part of the profession in London. A paper was read by Dr W. S. Playfair on the above subject, which ended as follows:—"My own conclusions may be briefly summed up in the statement that, although there are a large number of cervical lacerations which produce no effect whatever, and, having healed, call for no treatment, there are a considerable number which give rise to much irritation of the uterus, which lead to important secondary results; and that these cases can often be rapidly and permanently cured by the operation for the introduction of which we owe Dr Emmet a debt of gratitude, and with which his name will always be associated."

Dr Savage said Dr Playfair proceeded on principles directly opposed to those of Dr Emmet, who insisted that the operation should not be performed when there was any sign of disease in the cervix. The American school professed to believe that every disease (none excluded) incidental to the uterus might be, and generally was, the direct consequence of a cervical laceration. The English school disbelieved this, on good grounds. The diseases alluded to in Dr Playfair's paper could be seen in their entirety through an ordinary Fergusson's speculum. To apply to them Emmet's operation, which was admittedly not seldom followed by pelvic mischief, would be an act of extreme folly. Entropion, not ectropion, according to Emmet, was the common result of the lacerations.

Dr Herman had performed this operation in eight cases. All professed themselves benefited at the time they left the hospital. He thought benefit had sometimes been attributed to this operation which was really due to the cure of other concomitant morbid conditions.

Dr Priestley was prepared to believe that Emmet's operation would aid materially in curing some troublesome cases. His experience of it was limited to two or three cases; but he could recall others which had resisted all usual modes of treatment, and might probably have been cured by this operation. Ectropion with granular inflammation was not nearly so difficult to cure as endo-cervicitis in the virgin. He did not think these lacerations were attended with distressing symptoms so often as was represented. The operation was only required in exceptional cases; it was painful, difficult, and sometimes dangerous. He hoped, therefore, that it would not be performed with undue frequency.

Dr Wynn Williams did not agree with the paper either as to the simplicity or the risk of the operation. Cases ending in death, metritis, and perimetritis had been recorded. He did not think there were many cases in which it was required. Eversion was not always due to laceration.

Dr Bantock thought there was a field for the operation, but that the effects of laceration and the necessity for operation had been exaggerated. He had met with one case of laceration in which he thought the operation would be required, but the patient completely recovered without it.

Dr Murray called attention to a published fatal case. Operating when there was a suspicion of malignant disease appeared to him a curious idea. The duck-bill speculum magnified any little tear that might exist. Diagnosis was more fairly made by Fergusson's speculum.

Dr Heywood Smith agreed with Dr Playfair as to the importance of the operation, but maintained that areolar hyperplasia often existed without fissure, and could be cured by potassa fusa, or the cautery at a white heat. A raw granulating surface difficult to heal was analogous to malignant papillary dermatitis of the areola and nipple, and often a precursor of cancer; in such it was important to operate. He asked if any Fellows had operated immediately after labour. It seemed to him that there were considerable difficulties attendant on such a proceeding. He had performed Emmet's operation in many cases with great success, both as to repair of the cervix and relief to symptoms.

Dr Fancourt Barnes thought the operation was only necessary in cases of bilateral laceration of the cervix, with ectropion and enlargement of Nabothian glands. In unilateral laceration, thickening of the cervix could be more readily dispersed by ignipuncture.

Dr Carter had operated six times with benefit, four of the cases remaining well three or four months subsequently. Slight laceration of the cervix was very common—not so cases requiring operation.

Mr Knowsley Thornton called attention to the probability that fissure of the cervix with eversion predisposed to carcinoma, and that Emmet's operation prevented it. If so, a most important field for the operation existed.

The President (Dr Matthews Duncan) could not concur in thinking trachelorraphy one of the greatest advances in modern gynæcology. It might be an advance; but, admitting all that was said for it, it was a very small affair compared with the triumphs of laparotomy shown by Dr Bantock and Mr Thornton. A split condition of the cervix was said to be attended with Protean symptoms and disorders. Not long ago, ulceration, and then displacements, held the same position. He regarded all three as minor disorders, whose attempted cure was often the worst part of them. The Protean disorders were accompaniments, not consequences. Nevertheless, the cure of such lesions might be a valuable service to the patient. An ectropion which could only be shown by a special speculum and special manipulations was an artificial ectropion. He did not regard the profession as having hitherto mistaken ectropion for so-called ulceration. Such cases, with or without ectropion, were generally easily cured. In cases with hypertrophy a good old plan was the caustic potass. He believed that if a new laceration were made by cutting out a bit of the cervix, cure would follow just as well as after tracheloraphy. He regarded tracheloraphy as at present *sub judice,* but was not impressed in its favour. He had not done it, but had seen the most exaggerated lacerations of the cervix interfere in no degree with health, comfort, or fertility.

Dr Playfair had studied carefully the writings of Thomas and Emmet, and thought that Dr Savage must have misunderstood their meaning. It was impossible not to see that Dr Matthews Duncan was prejudiced against the operation; his remarks showed that he was not familiar with the use of the duck-bill speculum and tenaculum in these cases. The tenaculum was used, not to produce ectropion, but to draw the lips together. He thought that when Dr Duncan had fairly and impartially studied the subject he would alter his opinion. This operation was, of course, not to be compared to those to which Dr Duncan had referred; but if it were the fact that there were hundreds of women leading lives of constant suffering who might be cured by this operation, then it deserved to be called a great improvement in gynæcology.

OBSERVATIONS ON LACERATION OF THE CERVIX UTERI: ITS ETIOLOGY, PATHOLOGY, PREVENTION, AND TREATMENT, by W. Gill Wylie, New York (*American Journ. of Obstet.*, Jan. 1882).—THE ETIOLOGY OF LACERATION OF THE CERVIX UTERI, by E. van de Warker, M.D. (*Ibid.*)—NOTES OF ONE HUNDRED AND THIRTEEN CASES OF OPERATION FOR LACERATION OF THE CERVIX, by William Goodell, M.D. (*Ibid.*)—The fact of the three above papers (all of them lengthy) occurring in the same number of the *American Quarterly Journal of Obstetrics* will sufficiently indicate the importance attached to this subject across the Atlantic. Dr Goodell has not met with a fatal case, and in only a small proportion have there been any inflammatory results. He says:—"In my opinion the cervix should always be restored whenever ectropion of the mucosa takes place, and whenever the glands of Naboth become enlarged." "Another indication for the operation is a hereditary tendency to malignant disease." "A third is the existence of stubborn and subacute periuterine inflammations." While admitting that this is contrary to the teaching of Emmet and others, he supports his position on theoretical and clinical grounds. "Of the beneficial results of tracheloraphy I must candidly admit that I am not now so sanguine as at first. Cases have disappointed me; but then, on the other hand, I have undoubtedly operated on some cases unnecessarily. The broad rule may be laid down, that when marked ectropion exists, associated with enlarged Nabothian glands, with leucorrhœea and menorrhagia, the issue of the operation will be a happy one. In such cases I have had capital results. When, however, I have operated on a tear without ectropion, or merely on account of cicatricial tissue in the angles of the fissure, I have met with some bitter disappointments. But I now know better when to operate; and this fact I have learned, that nervous exhaustion and spinal irritation will evoke symptoms which others as well as myself have referred to slight cervical tears, but which are in no wise dependent on these lesions." Then follows a short and clear description of the operation.

THE USE OF IGNIPUNCTURE FOR CHRONIC PARENCHYMATOUS METRITIS, by Ad. Olivier, Paris (*Annales de Gynécologie,* February 1882). — The writer strongly advocates the above method, employed at the time when the stage of engorgement is passing into the stage of induration, and, with less favourable results, in the latter stage also. In the course of the paper he accurately describes the condition of ectropion of the cervix with enlarged Nabothian follicles associated with enlargement of the uterus, but does not hint at the causal connexion between the tear and the condition, which Emmet so strongly insists on. Ignipuncture, carried so far as to destroy the whole everted surface, is the treatment recommended.

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. Ed.

DISCUSSION ON THE SO-CALLED VIRUS OF THE CHANCROID.—The report of this discussion is given in *The Proceedings of the Medical Society of the County of Kings*, March 1882. Dr Sturgis gave a rapid review of the history of the development of our modern ideas of syphilis, in which he noticed how nearly John Hunter had hit upon the truth, and what important steps had been made by Ricord, Bassereau, and Fournier, and how the two latter had succeeded in proving, by the process of "*confrontation*," that venereal ulcers were of two varieties.

The next question to determine was, whether there were two varieties of the same poison, as certain experimenters found that the syphilitic chancre, if irritated, became auto-inoculable. To determine this point, Pick, under the auspices of Prof. Zeissl, inoculated syphilitic subjects with the pus from acne, scabies, etc., and obtained pustules resembling those from whence the pus was taken. With non-syphilitic subjects the results were negative. It would seem, then, that a certain constitutional condition was necessary in order that the inoculation should be successful. To determine whether this constitutional condition was necessarily syphilitic, Dr Ed. Wigglesworth of Boston made some interesting observations while studying in Vienna under Prof. Zeissl. He was slightly run down from overwork in the hospital, but entirely free from hereditary or acquired disease. He inoculated his forearm three times with pus from an acne pustule on his own person. It was followed after three days by three pustules. Two other successive inoculations were followed by similar pustules, but the action decreased in vigour. The conclusion drawn by the lecturer from these observations is, that there is no specific virus belonging to the so-called chancroid.

Dr J. S. Wight held that irritation was at the bottom of all our pathology. Inflammation is the result, the sequence, and product of the irritation. Nobody doubts that there is a specific poison in hard chancre. We do not at present know what the poison in the chancroid is. It may be a specific pus cell that irritates some other cell, or there may be bacteria that cause the irritation.

Dr B. F. Westbrook thought with Prof. Wight that this question resolved itself into one of irritation, but the difficulty is to find out the nature of the irritation. The fact that specific viruses rather tend to increase in virulence might rather militate against the theory that the chancroidal irritant was anything more than a result of a simple inflammation. It seems to die out by cultivation, whereas those viruses which are specific, as of smallpox, pyæmia, or anthrax, seem to increase in virulence by cultivation.

Dr G. H. Atkinson has for some time treated chancroid as a local disease of inflammatory character and origin. He did not believe that the chancroid is like syphilis. If there is any peculiarity in the virus of chancroid, where is it developed and under what circumstances (assuming that we have a true chancroid virus)? Whether its existence is temporary, for a few generations, or indefinite, there must be some particular locality for the development of this poison. It has occurred to him that the irritant secretions of the glands in the neighbourhood of the glans penis, underneath the foreskin, have the power of developing the poison, or this is the soil for the propagation of the poison, which is there introduced into the system in its most violent and characteristic form. One practical point had suggested itself to him, namely, the habit of beginning constitutional treatment (viz., mercurial) for local sores. He did not care whether syphilitic or non-syphilitic, there is a bad habit, brought down from classic times, of beginning the treatment of local venereal diseases with constitution remedies. If the patient has syphilis, there is a power in mercury to postpone the symptoms indefinitely, whereas if we wait until the disease goes through its local phase we are able to determine which is local and which constitutional.

Dr Sturgis, in concluding the debate, said that one of the points he wished to make was that by the term virus we are to understand something which infects the constitution, and which is constitutional; but since this term has been applied to many varieties which did not infect the constitution, an uncertainty exists as to the true meaning of the term. In regard to the question of the properties of pus, undoubtedly some are inoculable and some are not. Laudable pus is not. It must undergo a change before it becomes inoculable. What is the result? We get at once a sore, an ulceration. If we retain the term virus as something which produces a local irritation and a destruction of parts, then he did not see how we could properly exclude nitric acid. That is a logical conclusion, because here is a substance which produces an irritation and a destruction of the parts. Acid is merely destructive because it is an irritant. He claimed the same for chancroidal pus, and nothing else.

Dr Wight asked Dr Sturgis whether he regarded this unknown quantity as a chemical irritant, or whether it is a germinal matter which will propagate itself.

Dr Sturgis believed the unknown quantity to be an irritant, an inflammation that produces an irritation. It is purely a local irritation which corrodes the tissues and destroys them.

THE USE OF IODOFORM IN THE TREATMENT OF SOFT SORES.—In *The British Medical Journal,* 11th March 1882, Mr W. Whitehead recommends the following method of applying iodoform, so as to obviate its objectionable smell without sacrificing its therapeutic advantages:—He first carefully cleans and dries the sores with little pledgets of bibulous paper, and then, by means of a camel-hair pencil, applies freely over the surface of the sores a solution of iodoform in ether. The ether evaporates, leaving the iodoform in an impalpable powder over the sores. When perfectly dry, each sore is given a coating of collodion, which is allowed to overlap about a quarter of an inch the area of each sore. Before the collodion has had time to dry, a pinch of absorbent cotton-wool is placed on each patch as a protection. Goldbeater's skin may be substituted for the collodion. The solution he uses is one part of iodoform to two of ether, and in his Lock Hospital practice, where time and economy are of moment, he has the collodion and iodoform mixed together, the formula being, iodoform one part, ether two parts, collodion to ten parts.

LOCAL APPLICATION OF IODOFORM.—Mr Lennox Browne has for long used iodoform fixed in collodion in the treatment of glandular enlargements of the neck, and can confirm Mr Whitehead's experience of its advantages. It is easy, he says, to make a clear solution of iodoform in collodion without adding ether, by shaking up one part of iodoform with ten of collodion, taking care to add the iodoform to the collodion, and not the collodion to the iodoform.—*Brit. Med. Jour.,* 25th March 1882.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

TREATMENT OF ANEURISM OF THE LIMBS BY THE ELASTIC BANDAGE.—Duplay, in his usual clear manner, reviews the results of the above treatment, and endeavours, from the materials at hand, to lay down certain rules for future guidance. In April 1881 Steinson was able to collect 52 cases (almost exclusively of femoral and popliteal aneurism) in which this treatment had been adopted. The results were, 28 complete cures, 22 failures, and 2 deaths. From the 22 unsuccessful cases we must deduct 10 in which there was no compression of the artery after removal of the bandage; and further, 7 in which the treatment was not completely followed out; so that there was actual failure in 5 cases, or 15 per cent. only. Duplay asks, Is compression dangerous to the whole organism? Both the fatal cases seem to afford an affirmative answer. The first patient was phthisical, with a fatty heart, and in his case the bandage had been inadvertently left on for four hours after the removal of the constricting tube. At the autopsy nothing more exact was found to account for death, which occurred 27 hours after completion of the operation. Certainly, but for the operation in question the patient would not have died. In the second case hæmorrhage had taken place from the ruptured aneurism, and as the patient would not consent to amputation, the bandage was kept on for a lengthened period. Gangrene ensued, with a fatal result on the eighth day. The second question is, Are those cases more liable to gangrene in which deligation is performed after the elastic bandage has been tried and failed? In 16 cases subsequently treated by the ligature gangrene occurred only once; while, according to Holmes, this complication arose in 2 or 3 cases in which the ligature was primarily resorted to. Duplay regards these figures as too small to justify any definite conclusions being based upon them. According to Steinson, the curative process is as follows:—The blood in the sac coagulates whilst the elastic bandage is in action. The thrombus thus formed is strengthened by coagula during the subsequent compression of the artery, and the latter becomes obstructed at its point of junction with the sac. As the serum is reabsorbed and the thrombus diminishes in size, the walls of the sac retract likewise, and may even acquire an increased thickness owing to the irritation of the contained clot. A similar irritation gives rise to the formation of granulations in the neighbourhood of the orifice of the sac, and thus completes the occlusion of the vessel. The correctness of this view is proved by the fact that in the majority of successful cases pulsation has been observed in the sac on the removal of the elastic bandage, and that this pulsation only ceases after a lengthened compression of the artery. The primary clot must be strengthened by the after-following blood (coagulated by compression of the artery) before a cure can take place. Duplay concludes that this method of treatment is very effective when carried out in the following manner:—The elastic bandage and ligature (the aneurism not being interfered with) are applied for 1 or 2 hours, and on their removal the artery is compressed digitally for several hours longer—towards the end intermittently, in order to observe whether or not pulsation recurs in the sac. If pulsation becomes re-established a few hours after an apparent cure, the artery must be compressed *de novo* (Duplay, *Archiv gén. de Méd.*). —Riedel, in *Centralblatt für Chirurgie.*

A DANGER FROM THE USE OF THE DOUBLE SUTURE AFTER INTESTINAL RESECTION.—An intestinal resection on account of acute femoral hernia had been performed in the clinic, but the patient, a female, died forty-two hours afterwards with all the symptoms of continued ileus. The autopsy disclosed the presence of a valve-like narrowing at the sutured spot. The first inspection of the gut showed that the lower half of the small intestine, below the suture, was quite empty, whilst the upper portion was full and distended. The gut being separated, its permeability was tested with both air and water, and it was found that fluids could pass upwards, but not downwards. Evidently a kind of valve had in some way become developed, which prevented the downward passage of the intestinal contents. On closer inspection of the portion of intestine, after it had been laid open from both ends, it was seen that a swelling of a fold of the mucous membrane of the jejunum, in combination with the sutured inversion of the edges of the wound in the gut, had produced the obstruction in question. I had in this operation followed Czerny's advice, and employed a double row of sutures. Eight of these were internal and six external, and each enclosed a half centimetre of mucous membrane. The condition of the sutured gut had seemed to be altogether satisfactory, and I returned it through the somewhat dilated femoral ring with a clear conscience. Experience has taught me, however, that this double suture has its dangers, and I would urge that at all events it be not used in operations involving the jejunum. In the latter case, in order to obtain complete inversion of the serous layer, I would advise that the lower mucous fold of the jejunum (which on transverse section usually becomes strongly everted) be dissected off circularly in front of the stitch. In this way, at any rate, the lower fold could not become part of an obstructing valve. —W. Roser, in *Centralblatt für Chirurgie.*

ON RESECTION OF THE INTESTINE IN CASES OF GANGRENOUS STRANGULATED HERNIA.—Having shortly referred to the sixteen cases of intestinal resection already published, nine of which, or fifty-six per cent., terminated fatally, Jaffé gives an exhaustive description of the operation, which is to be performed under strict antiseptic precautions, and hopes that attention to the following points may, in the future, secure more favourable results :—1. Resection of the intestine is indicated when gangrene has manifestly taken place, and when the signs of general peritonitis are wanting. 2. The gut is best dilated by means of numerous superficial incisions. 3. Resection may only be performed in healthy portions of gut. 4. Closure of the portion of gut left behind is secured by means of temporary silk ligatures placed on the afferent and efferent portions of the intestinal tube above and below the points of section. 5. The difference in the lumina of the two portions of gut to be joined may be adjusted by means of oval sections, the convex side of the intestine being that from which most tissue is to be cut. 6. The enteroraphy is to be done either with Gussenbaum's safety-stitch, or, still better, with the double-row suture of Lembert and Czerny. Catgut, when firm and reliable, is preferable to silk for this purpose. 7. If favourable progress be made, three days of low diet are treatment enough. Nutrient enemata are usually unnecessary, but small continued doses of opium are to be recommended. As proof of these statements, Jaffé cited a case in which he had operated at the Hamburg General Hospital. The patient was a woman who had suffered for more than ten years from femoral hernia. Herniotomy and resection were performed after symptoms of strangulation had lasted thirty hours, and a portion of gangrenous intestine (hernia littrica) 4·68 inches in length was removed. Rigid antiseptic rules were followed, and the exposed peritoneum was washed with thymol or chlorine water. The hernia was radically cured, and complete recovery took place in about two months (K. Jaffé, *Samm. Klin. Vorträge*).—Kramer, in *Centralblatt für Chirurgie.*

POTASH PERMANGANATE IN CASES OF SNAKE-BITE.—The venom for these experiments was obtained by inciting the animals to bite cotton-wool. It was then diluted with a small quantity of distilled water, and injected by means of a Pravaz syringe into the veins or subcutaneous tissue of dogs. In the former case symptoms of poisoning appeared, and death took place after a longer or shorter time. When the virus was injected subcutaneously, extensive abscesses and mortification resulted. If, however, 2–3 ccm. of a 1 per cent. solution of potash permanganate were injected immediately after the administration of the venom, all symptoms of poisoning remained absent, and if any such had already appeared (such as dyspnœa, irregular pulse, dilatation of pupils), they soon vanished completely. In thirty experiments the potash salt only failed twice, and the animals in these cases were young, weak, and badly nourished. In place of phlegmonous suppuration after the subcutaneous injections there was merely a transitory non-purulent infiltration (Lacerda, *La France Médicale*).—Janicke, in *Centralblatt für Chirurgie.*

EXPLORATION OF THE URETERS IN THE FEMALE.—As it not unfrequently happens that a ureter is ligatured during ovariotomy, myomotomy, and extirpation of the uterus, per vaginam, and the issue of the operation thereby rendered more unfavourable, it becomes desirable to be acquainted with the course of the ureters in each individual case. The methods in use hitherto—those of

Tuchmann, Simon, and Emmet—are insufficient, and Pawlik has devised a new plan, which he describes in the following manner:—"The method depends on the discovery that the *Trigonum Lieutaudii* (vesicæ) is more or less clearly marked out on the anterior vaginal wall. I place the woman in the knee-elbow position, and raise the perinæum with a Sims's speculum. Intra-abdominal pressure is diminished, the air enters and dilates the vagina, and puts the anterior wall on the stretch. We can regulate this tension by raising and lowering the upper part of the patient's body. From the small elevation which usually marks the termination of the urethra, two rows of furrows run right and left at an obtuse angle with each other, and oftentimes form a distinct prominence. Higher up, nearer the vaginal portion (of the cervix), these are crossed by transverse ridges, and the triangle thus marked out corresponds with the *Trigonum Lieutaudii.* In the direction of these furrows lie the orifices of the ureters. I introduce the sound through the urethra, bring its bent end against the posterior vesical wall, and can then follow its movements at pleasure. The point of the instrument is passed over the before-mentioned triangle. Naturally so small an opening is not immediately found, and an error of a fraction of an inch causes us to miss the mouth of the tube. As a rule, however, the instrument is soon passed. I do not confine myself to a certain 'point,' but to a certain 'direction.' A little practice enables us to tell at once when we have entered the canal. If the instrument is in the ureter its movements are hindered, whilst if still in the bladder it can be freely moved in all directions. A further sign is the trickling of a few drops of urine from the catheter. This does not occur immediately after the introduction of the catheter; the latter has to get completely full before the trickling commences. Injection of a coloured fluid, such as milk, into the bladder is the best proof that the catheter is in the ureter. If the instrument has been successfully passed, only clear urine comes through it. The sound is easily passed onwards till its point reaches the neighbourhood of the pelvic inlet. Here the ureter bends from the true into the false pelvis, and the handle of the instrument must be raised against the perinæum in order to follow the change of direction." In order to allow the air to escape from the bladder when the sound has been withdrawn, Pawlik advises the introduction of a large catheter. The method has been tried in fifteen cases. In prolapse it has only succeeded once. It requires practice (Pawlik, at Salzburg Congress).—Kramer, in *Centralblatt für Chirurgie.*

ON PROCESSES OF DEGENERATION AND REGENERATION IN THE NORMAL PERIPHERAL NERVOUS SYSTEM.—In this comprehensive treatise Mayer adduces evidence to show that the medullated nerve fibres are no unchanging structures, but that profound alterations both in their build and chemical composition are constantly going on. He invariably found that in the normal peripheral nervous system of men and mammals generally, processes of de- and regeneration are constantly at work, similar to those which have been observed in the ends of nerves divided in their continuity. The methods of examination, and the changes observed in the nerves, are then described and illustrated with numerous figures. Further on, the distribution of these processes in the various parts of the peripheral nervous system, and their dependence on age and the state of the nutrition of the individual, are treated of. Mayer is inclined to believe that all these changes in nerve fibre occur normally, and that they usually lead neither to sensory nor motor functional derangement, but that they are in a position to do so if they rise above a certain point. Possibly these processes may afford an explanation of those neuroses in which as yet no actual and demonstrable changes have been discovered (S. Mayer, *Zeits. f. Heilk.*)—H. Braun, in *Centralblatt für Chirurgie.*

REPAIR IN TRANSVERSELY STRIPED MUSCLE.—Sokolow bases the following conclusions on the results of eighty experiments on cats and rabbits:—Transversely striped fibres are repaired, after injury, by a longitudinal growth of their divided ends. The chief part in this regeneration is played by the nuclei of the old muscular fibres, and from them is derived the transversely striped matter of the newly-repaired ends. Neither the white blood-corpuscles nor the cell elements of the sarcolemma take part in the process (P. Sokolow, Kiew).—Von Heidenreich, in *Centralblatt für Chirurgie.*

A NEW METHOD OF CURING HYDROCELE.—This new method of treatment consists in the introduction of a bougie into the sac after the latter has been punctured and evacuated in the usual manner. In the case of children or young persons the bougie (1–10th inch in diameter) is introduced to a depth of four or six inches, and remains in the sac from one to twelve hours. In adults the bougie may be passed in to a depth of twelve inches, and be retained for twenty-four or even thirty hours. When reaction has thus been ensured, the bougie is removed, and the inflammation treated by rest, compresses, etc., according to the degree of its severity. This new method has been tried in 250 cases. It is said never to have yet failed to cure, and that recurrence is rare (Regazzoni, *Giorn. Internaz. d. Sc. Méd.*)—Escher, in *Centralblatt für Chirurgie.*

FLOATING KIDNEY IN THE FEMALE.—So divergent have been the views held on the subject of floating kidney and its pathological and therapeutic relations, that whilst, on the one hand, it was regarded merely as an anatomical curiosity and of no further clinical interest, on the other (by Keppler especially), it was looked on as a condition extremely dangerous to life, and one which must be got rid of at the earliest possible opportunity by extirpation of the organ concerned. In the present work [1] Landau gives a systematic description of the disease, and the new views which observations made in 45 cases have led him to adopt with regard to it. A brief historical *résumé* of the subject is followed by remarks on the normal position of the kidney and the mechanism by which the organ is therein maintained. In giving statistics of the frequency of the occurrence of movable kidney, Landau states that the disease is often overlooked or wrongly diagnosed. It is most common in women (Ebstein, for example, of 96 cases, 82 were women), and especially between the ages of thirty and forty. The right was almost always the one affected. This more frequent occurrence in women Landau explains by the easier development in them of the causal conditions. Besides tumours which mechanically displace the kidney, and the rapid disappearance of fat in acute or rapidly wasting diseases, the lax condition of the abdominal walls after parturition plays a special part in bringing about the floating condition of the kidney. In these cases, during the severe straining (of the abdominal muscles) which frequent constipation causes such persons to exert, the effective means for the fixation of the abdominal contents are wanting, whilst, on the other hand, the pendent intestines in this lax pouch exert a direct traction on the parts above them, and so on the kidney. In numerous cases, prolapse, alterations in position, and inversions of the uterus, by exerting a direct traction-power, may favour the descent of the kidney; and finally, a series of diseases of the female genital organs, by producing hydronephrosis and consequent relaxation of the renal capsule, may contribute to bring about the same result. Under such conditions severe work or straining, or an attack of coughing, will determine the change in the position of the kidney. The more frequent implication of the right kidney Landau regards as being due to the weaker nature of the attachments of that viscus. Clinically he is unable to adopt any of the explanations of the so-called strangulation symptoms offered by other authors. He finds this rather in an intense disturbance of the local circulation occasioned by the torsion or bending or acute angular insertion of the renal vessels, the result of the changed position and revolution of the kidney. Further, in opposition to other authors, he observed changes in the quantity and quality of the urine, and urges that its excretion may be temporarily interrupted by torsion or bending of the ureter. These changes of position, with their consequences, also give rise to the colicky pains so often observed in cases of movable kidney, and their frequent and severe recurrence may lead to the development of hydronephrosis. Among objective symptoms Landau lays most stress on palpation, which must be performed bimanually, with the patient in various positions. Uncomplicated floating kidney, according to Landau, is without danger to life. Keppler's fatal case he regards as devoid of proof, and the fact that spontaneous recoveries have been observed, as well as the circumstance that, under suitable treatment, relief of all troubles accompanied the cure, leads him to the conclusion that extirpation of an otherwise normal floating kidney is in no respect allowable. Notwithstanding that the present state of surgery offers the operation the most favourable conditions, three of six such cases, in which extirpation of a healthy floating kidney was effected (since the end of 1880) ended fatally. We must also bear in mind that we cannot make sure beforehand of the condition of the other kidney. For fixing the affected organ Landau has made use of a corset reaching to the pubes; whilst to strengthen the abdominal walls, electricity, massage, douches, and sea-bathing have been had recourse to. Landau does not regard the complications of this disease as dangerous to life. Starting with the fact that the menacing strangulation-symptoms may have a fatal issue, and holding the above-described theory of the pathogenesis of this symptom-complex, he considers that any attempt at reposition is only indicated in the early stage, and then with the utmost caution, and confines himself merely to an expectant symptomatic treatment (rest in bed, opium, ice-bags). Only on the occurrence of peri- or paranephric abscess, or when the kidney itself has suppurated, are free incision and eventual extirpation of the organ called for (Landau, *op cit.*).—A. Henry in *Centralblatt für Chirurgie.*

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[1] Landau, *Die Wanderniere der Frauen.* Berlin, A. Hirshwald, 1881.

Part Fifth.

MEDICAL NEWS.

By the courtesy of the publishers, just as we are going to press we have received an early copy of the first volume of the reissue of Dr John Brown's *Horæ Subsecivæ.* From its new pages we extract the following exquisite little bit of description, which will to many of us recall with exactness and pith old and pleasant days. It is from a most perfect miniature recollection of Mr Syme. "In his little room in the Surgical Hospital—once the High School—where Sir Walter, Jeffrey, Cockburn, Horner, and Brougham were bred—his house-surgeons and clerks and dressers—now all over the world, working out his principles and practice—will well remember how delightful he was, standing with his back to the fire, making wise jokes—*jacula prudentis*—now abating a procacious youth, now heartening a shy homely one, himself *haud ignarus,*—giving his old stories of Gregory and Dr Barclay. How the latter—who had been a 'stickit minister,' was a capital teacher of anatomy and good sense—used to say to his students—'Gentlemen! Ves*aa*lius and his fellows were the reapers in the great field of anatomy—John Hunter and his brethren were the gleaners—and we—gentlemen!—are the stubble geese!' Little thought he of the harvest that lay at the roots of the stubble—and all the revelations of the microscope, the cell theory—and much else! Then there was a story of Dr Greville the botanist, telling him, Dr Barclay, that he had been out at Middleton Moor, searching all day in vain for *Buxbaumia Aphylla.* '*Bux* what? and what's remarkable about it?' 'It's a very rare moss and very difficult to find.' 'Weel, I lost a sixpence when I had few o' them, fifty years ago, on Middleton Moor, and searched for it maist of a day —gang oot and try—it'll be as difficult to find as your *Buxbaumia;*' and then we had John Abernethy, whom he thought the greatest surgical mind since John Hunter and Percival Pott; and his joke with the lady of quality, who came to him and said, 'I'm quite well, Mr Abernethy.' 'So I see, Madam.' 'But, Mr Abernethy, whenever I do that,' (making a vehement and preposterous flourish of her hand over her head), 'I have a terrible pain.' 'Then, Madam, why the devil do you do that?' It was in this little room Mr Syme was in his glory and let his whole nature out—and these daily treats were interspersed with remarks on the current patients —making the dressers tell their several stories—and always as thoughtful as keen, filling their eager minds as they stood in a semicircle before him, *intentique ora tenebant*—with truths the value of which they found in after years. And there were Mrs Porter and Mrs Lambert, the nurses, who reigned over the male and female wards—who will ever forget their kind and shrewd faces, and old-fashioned sense and tongues?" The whole volume is full of wit and wisdom. It will be a medical classic, like the *Religio Medici.*

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—List of Candidates who obtained the License of the College on the 5th April:— George Stratton Aslett, M.R.C.S., Carmarthen; Francis John Mulock, L.R.C.S.I., Athlone; Alexander Bruce-Payne, M.R.C.S., Deal, Kent; Michael Henry Feeny, M.R.C.S., London; George Augustus Macnutt, M.R.C.S., London; Norman George Whelan, M.R.C.S., London; John Campbell, M.D., Seaforth, Ontario, Canada; William Taylor Bell, M.R.C.S., Totteridge, Herts; Roger William Barrow, M.R.C.S., Liverpool; James Sutherland, L.R.C.S., Co. Durham.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.— The following gentlemen passed their final examination for the double qualification in Medicine and Surgery during the April sittings of the examiners, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Joseph Samuel Dunlop, Co. Durham; James P. Johnstone, Edinburgh; Robert William Jephcott, Birmingham; Cyril John Williams, Edinburgh; Symers P. Macvicar, Moffat; Henry Bolingbroke Seymour Curll, London; Alexander Meighan, Glasgow; Albert Primrose Wells, London; Hartly Dixon, Adelaide, South Australia; James Thomas Carter, Duddingston; H. W. M. Venables-Williams, Conway, North Wales; James William Jeram, London; Francis Edwin Mulliner, Birkenhead, Cheshire; Campbell Tulloch Dewar, Dublin; William Johnson, Newcastle-on-Tyne; William Turner, Edinburgh; James Gunning, Co. Sligo, Ireland.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Surgery on the 21st of April, and were admitted L.R.C.S. Ed.:—James Walshe Davidson, Ireland; John Griffiths, Carnarvon; Harold Allan Wild Batten, London; Arthur Storrs, Edinburgh; Harry Pennington Hallows, Inveresk; Ernest John Jerome, Sheffield.

THE RADICAL CURE OF CANCER.—ANNOUNCEMENT CONCERNING ESSAYS UPON THIS SUBJECT OFFERED IN COMPETITION FOR PRIZES.—The undersigned, who, in October last, was delegated to receive competing essays on the subject of the radical cure of malignant disease, announces that three essays were presented. In the consideration of their merits the assistance of Dr George B. Shattuck, editor of the *Boston Medical and Surgical Journal,* was invoked; and it has been decided that no essay is worthy of a prize. The same subject, namely, *The Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring such a Cure to Light,* is proposed for essays to be presented in competition not later than the first day of December, eighteen hundred and eighty-three (1883), to the undersigned, who, with such assistance as he may select, will be the judge of their merits. For the best essay on the above subject a prize of One Thousand Dollars will be given, the right being reserved to withhold the prize in case no essay of sufficient merit be presented. The sum above mentioned has already been deposited in the New England Trust Company, of Boston, subject to the call of the judges. The essays must be legibly written in English, and neatly bound. Each one must bear a motto, and be accompanied by a sealed envelope bearing the same motto, and inclosing the name and address of the writer. They will all remain in the possession of the donor of the prize for convenience of reference, and the privilege is claimed to publish the successful one, with the name of the writer. No writer, however, surrenders the privilege of retaining a copy of his essay, and publishing it. The decision concerning the merits of the essays will be made chiefly from a practical standpoint, it being the object of the donor of the prize to obtain suggestions by which a search for a cure for cancer may be instituted.—J. COLLINS WARREN, M.D., 58 Beacon Street, Boston, Mass., U.S.A.

THE CHRONIC CARBOLIC ACID POISONING OF SURGEONS.—Professor Czerny, of Heidelberg, in discussing the relative value and danger of carbolic acid and iodoform, makes some interesting comments on the chronic carbolic acid poisoning of surgeons. The amount of carbolic acid taken into the system by the surgeon during a single operation may be, as he shows, very great. The following surprising statement is made by Falkson. In the twenty-four hours succeeding a two and a half hour operation in which a two per cent. carbolic acid spray was used, he excreted by the urine 2·0655 grammes of carbolic acid. Now the maximal dose of carbolic acid is two or three minims, which would be fourteen times less than the amount thus thrown off by the kidneys alone. It is well known that the drug is excreted by the skin and lungs also. Professor Czerny says that the history of the surgeon's sufferings from chronic carbolic acid poisoning has yet to be written. He gives, however, some of the symptomatology. The "carbolic marasmus," as he calls it, begins with slight headaches, bronchial irritation, languor, and diminished appetite. When the poisoning is of long standing or intense, the cough becomes permanent, there are heavy dragging pains in the region of the kidneys, the legs feel heavy, there is a sluggish circulation in the abdomen, nausea, especially in the morning, cutaneous pruritus, and finally insomnia, which latter may be due in part to the formication and other disagreeable sensations in the hands. The blood becomes impoverished, and the face assumes an anæmic appearance. The symptoms are, says our writer, such as would come under the head of what is now described as neurasthenia. But it is a neurasthenia which will disappear after vigorous walking in the open air and a few days' absence from the clinic. The symptoms, no doubt, vary with the idiosyncrasy of the individual, and it would be a matter of much interest if more complete data regarding this form of poisoning were accessible. Professor Czerny has never seen any structural change result from the constant absorption of carbolic acid. His conclusion is, however, that phenol is not a safe thing for the surgeon to use constantly, especially according to the method of Lister. In comparing it with iodoform, it may be said that the iodoform is safer for the surgeon, the phenol safer for the patient. There is, however, no great danger to the patient from either agent if it be judiciously used.—*The New York Medical Record*, March 18, 1882.

PUBLICATIONS RECEIVED.

R. F. Benham, M.R.C.S.,—The Supply of Water to our Homes. J. & A. Churchill, Lond., 1882.

H. V. Carter, M.D.,—Spirillum Fever.—J. & A. Churchill, Lond., 1882.

Cornil and Ranvier,—Manual of Pathological Histology. Smith, Elder, & Co., Lond., 1882.

Hasket Derby, M.D.,—Anæsthesia and Non-Anæsthesia in the Extraction of Cataract. Cambridge, U.S., 1882.

Horace Dobell, M.D.,—Diet and Regimen in Sickness and Health. H. K. Lewis, Lond., 1882.

R. E. Dudgeon, M.D.,—The Sphygmograph. Baillière, Tindall, & Cox, Lond., 1882.

D. Embleton, M.D., F.R.C.P.,—A Visit to Madeira in the Winter 1880-1881. J. & A. Churchill, Lond., 1882.

J. Milner Fothergill, M.D.,—Chronic Bronchitis. Baillière, Tindall, & Cox, Lond., 1882.

Professor Charles Labus,—Congrès International de Laryngologie. Pierre Agnelli, Milan, 1882.

J. G. Leask, M.B.,—Examination Questions on the Medical Sciences. Baillière, Tindall, & Cox, Lond., 1882.

Wm. Murrell, M.D.,—What to do in Cases of Poisoning. H. K. Lewis, London, 1882.

C. H. Ralfe, M.A., M.D.,—Morbid Conditions of the Urine. J. & A. Churchill, Lond., 1882.

Dr Reliquet,—De la Lithotritie Rapide. Adrien Delahaye et E. Lecrosnier, Paris, 1882.

Sydney Ringer, M.D., — Handbook of Therapeutics. H. K. Lewis, Lond., 1882.

Alder Smith, M.B., F.R.C.S.,—Ringworm: its Diagnosis and Treatment. H. K. Lewis, Lond., 1882.

Graham Steell, M.D. Ed.,—The Physical Signs of Pulmonary Disease. Maclachlan & Stewart, Edin., 1882.

L. H. Tossmill, M.B.,—Ectropion. J. & A. Churchill, Lond., 1882.

Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On Ulcers and Eczema of the Lower Limbs.*[1] By W. ALLAN JAMIESON, M.D., F.R.C.P.

THE lower extremities are liable in a peculiar degree to certain affections of the skin, which, while met with in other parts of the cutaneous surface, for special reasons are more severe, and assume different features, when manifesting themselves on the legs. Of these, cutaneous ulcers and eczema are prominent examples.

We must remember that for sixteen hours out of the twenty-four the position in which the leg at least is placed is, in the large majority of persons, a vertical one. When standing or walking the whole limb is vertical; when sitting the leg is so, or at least is placed at an angle which diverges considerably from the horizontal. The column of blood, therefore, returning through the veins to the right side of the heart, presses against the sides of the vessels. The walls of these vessels are reinforced by the aid which they receive from the fasciæ, the tonic contraction of the muscles, and the elasticity of the skin. The return of blood is also assisted by the valves which are placed here and there in the course of the veins. In persons originally healthy, with firm, well-developed tissues, this support is amply sufficient; but in civilized life there are many factors which militate strongly against the maintenance of a perfect balance of health. There are, for example, defects of occupation. Many individuals, in order to earn their livelihood, have to stand nearly motionless behind a desk or a counter. The heart thus receives no aid from the contraction of the voluntary muscles of the lower limbs in enabling the return current to be carried on, and while the blood is pumped vigorously down into the legs, it has to find its way back slowly and with difficulty. This alone might perhaps not do great harm, but with the want of muscular exercise the liver and abdominal organs become sluggish, and there is often pressure from above as well as impeded action from below. The blood itself becomes thinner, the vascular walls are less efficiently nourished, the skin becomes relaxed, and the veins yield because they are weaker themselves and are less perfectly supported from without. We have thus established a condition known as varicosity, seen often in its most extreme degrees in women who have borne many and large children, but met with in men, in unmarried and sterile women, and even in young girls. Now, while the tortuous dark blue or almost blackish cords which we see on the inner side of the knee, for instance, in such cases are sources of danger in more ways than one, as being ever liable to phlebitis, to consequent coagula within their lumen, and to thrombus, as well as sources of much uneasiness and positive pain, and, besides all this, liable to rupture, and directly endanger life by hæmorrhage, it is the smaller varices, those which form in the lesser vessels, which lead to the diseased conditions of the skin, the ulcers and the eczema of which I have spoken. Besides the points to which I have already directed attention, there are others not less important, all tending to lead to the same final result. While the main arteries which convey the blood to the foot are deeply seated and well out of harm's way, the large proportion of the veins which bear it back again lie superficially. Hence their walls are mainly supported by the elasticity of the skin. As life advances the cutaneous fat which gives roundness to the contour often diminishes in the leg to a greater extent than elsewhere, the muscles become denser and harder and atrophied, and the skin itself undergoes those senile changes which have been well described by Neumann, and loses its tension. Thus the blood ascends to the heart more slowly than was its wont. In women, too, the cessation of menstruation causes over-fulness of the vascular system and an undoubted paresis of the vaso-motor nerves, the result of which is often seen in the face as rosacea. Sluggishness of the circulation follows as a sequence. Kaposi has well shown how a tardy current of blood in the veins of the leg leads to the production of ulcers. This delayed current causes a tickling sensation, for any slight irritation of the skin, if repeated frequently, gives rise in the first instance to a tickling sensation and then itching. Around the glands of the skin the arrangement of the smaller vessels is most complex and tortuous, and these plexuses act as species of connecting links between the superior and inferior horizontal networks of cutaneous vessels. Consequently it is about the hair follicles that the stagnation and the itching are in the first instance most marked. Small effusions of blood, minute hæmorrhages, occur either in the papillæ or round the hair follicles, and small, hard, prominent papules are produced. Involuntarily, often during sleep, these are torn by the finger-nails; for though the changed position has rendered the maintenance of the circulation easier, the dilatation of the vessels is not so easily recovered from, and the very warmth of bed has in itself a tendency to generate itching. The skin becomes torn, inflamed in small areas, and pigmented, an invariable result of long-continued cutaneous irritation. It can now be easily understood that though in its minor grades all this may be easily recovered from with little permanent scarring, should the exciting cause be continued, things must go on from bad to worse. The excoriations become deeper, tend to invade more and more adjoining parts, in accordance with the law of spreading *per continuum* which specially holds good in many disorders of the skin. The persistent inflammation causes outpouring of lymph round the margins of the broken-down areas, making the edges of the ulcers stand up as dense cartilaginous walls in old cases, and still further hemming in the pervious vessels. The nutrition of the skin of the legs is now permanently lowered; they are more or less œdematous, painful, and stiff, and with one or more ulcers occupying a greater or less extent of surface. A question here arises,—Why do ulcers of the leg, when connected with varicose veins, occur so frequently at the inner and lower part of the leg? This has been so admirably answered by Mr Hilton in his delightful and encouraging lectures on Rest and Pain, that I venture to quote his words:—"The superficial and deep veins of the leg freely communicate with each other in the neighbourhood of the ankle-joint. The first two inches above that point is the spot where the greatest stress is laid upon these superficial veins. Below that point they freely communicate, and if the blood cannot return by the superficial veins, it can do so by the deep veins, or *vice versâ.* But when you reach the point where that brown patch of skin so often occurs in old persons, above the inner malleolus, the anastomoses are less free, and this appears to me to be the reason why ulcers from varicose veins occur so frequently about that neighbourhood." It is often a marvel how working men can do their tasks, crippled as many of them are by ulcers of the legs. I have many times seen men who had ulcers, sometimes on both legs, as large as the palm, and who yet walked a mile or two to and from the place where they were engaged, perhaps in stoking a furnace or attending to a coal-heap all day. Callous ulcers, they undoubtedly are in more senses than one. Now and then an acute attack of lymphangitis or dermatitis would supervene, confining them to bed for a time, and leading to a further enlargement of their ulcer. You will meet sometimes with such ulcers in the better ranks of society: gouty they are often termed. There is, indeed, in such persons, a gouty habit; yet I believe the gout and the ulcer depend in general on the same cause, not the ulcer on the gout. Defective assimilation is at the bottom of the evil. Easy habits, self-indulgence, and a sedentary life are the main factors.

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[1] Introductory lecture to the course on diseases of the skin, Edinburgh School of Medicine, May 1882.

Now what are we to do in such cases? We have seen what the chain which led to the formation of the ulcer was made up of, the main link being a deficiency in that constant elastic tonic support to the vessels which should exist in a healthy limb. This gives the key to all successful treatment, but the exact mode in which it is to be carried out is by no means identical in all cases. We must take into consideration not only the ulcer itself, but the individual. In some cases it may be a tolerably easy matter for the sufferer to lay up in bed or on the sofa for a few weeks till the loss of tissue is repaired. In general this would involve, in the class of persons in whom those ulcers are most frequent, a serious pecuniary loss. In these, then, we must endeavour to replace artificially the defective natural support to the vessels. First of all, any acute inflammatory complication must be allayed by rest in the horizontal position. This is imperative. Combined with rest, starch poultices give most relief. These should be made of Glenfield starch, prepared as for starching linen ; allowed to cool, when it sets into a transparent jelly. This is thickly spread on a piece of rather thickish old cotton of a suitable size, covered with muslin, and the inflamed part enveloped in it. This forms a delightfully cool and soothing application, which retains its moisture for a considerable time, but should be renewed ere it becomes hard. Never apply a starch poultice hot. Always allow the starch to set before using it. Another plan, and an excellent one when the discharges have become fœtid, is to dress for some days with boric lint and lotion, which soon renders the part sweet and the discharges inodorous.

Two plans are now open to us, and sometimes one, sometimes the other, suits best. In most cases strapping with bands of adhesive plaster *cut lengthwise,* so that the plaster will not stretch, answers best. This plan of treatment seems to me to have fallen, in these days of antiseptics, undeservedly into disuse. I had, many years ago, an opportunity of seeing an immense number, some hundreds, of ulcers of the leg, in the workhouse at Preston, in Lancashire. All were treated, and most satisfactorily, on this plan. The strips must be smoothly applied from below upwards, and directly to the ulcerated surface. The lower edge of the lowest strip should be snipped in one or two places, so as to prevent its cutting the skin. The strips are to be changed, at least till the discharge very much diminishes in amount, every day. Over the plaster, from the toes to the knee, a roller bandage is carefully applied. The best bandage is the so-called *water-dressing bandage,* open wove cotton, with *torn* edges. Sometimes a domette flannel answers better. The bandage should be secured with a safety-pin, not tied, below the knee. These seem trivial details, but success depends on attention to minutiæ. It is quite wonderful the relief afforded by this treatment, while it enables the patient to move freely about. The other mode is to envelop the legs in Martin's solid rubber bandages, and when the skin will stand this without blistering, the results are excellent. Some persons, however, cannot bear the heat the bandage causes. Use always the *genuine* ones. Dr Martin says that the rubber employed must be thoroughly "cured," and the bandage prepared with a minimum of sulphur—

directions which do not seem to be followed out by the makers here. His are now made thinner than at first, and these thin ones answer well if no great strain is to be put on them; but the stronger and thicker ones will be found, in cases of extensive ulcer, the best, most serviceable, and the cheapest in the end. The bandage must be put on before rising from bed in the morning, ere the limb swells; removed, and the ulcer dressed with some boracic lotion, gutta-percha, and roller at night. This is generally better than an ointment, as oily matters rot the bandage, and patients are apt to be careless in wiping off the salve before applying the bandage in the morning. The boracic acid has the advantage of keeping the sore sweet; for when the rubber bandage is taken off, the pent-up secretions of the limb and ulcer too often are most offensive. The leg should be bathed with tepid water at night, and gently dried before being dressed, and the bandage itself rinsed through warmish water and hung up to dry on a line or towel-rail. The bandage replaces most admirably the elastic support of the skin which had become defective, and, indeed, in time in a great measure restores this, provided the state of the general health, the condition of the bowels and kidneys especially, be attended to, and any error in occupation remedied as completely as possible.

Turning our attention now to eczema as affecting the lower limbs, we find that it occurs either as part of a general outbreak, which involves more or less extensively the whole body, in which case the extremities very commonly suffer most; or the disease is local, and is chiefly limited to the space between the ankle and knee, sometimes, though more rarely, stretching over the foot. There are few forms of eczema which cause more annoyance to the sufferer than those which implicate the arms and legs. When eczema of the legs is slight and superficial, the severe itching, vexatious enough during the day, but so much aggravated at night as to interfere with if not entirely preclude sleep, leads directly to mental and bodily exhaustion. When more deeply affecting the skin, the disease may quite prevent locomotion, and confine to the house, if not to bed. And yet eczema in this locality can be more satisfactorily treated than that in almost any other, the very causes which lead to its production enabling us the more readily to cope with it. These causes are much the same, as far as mechanical influences are at work, as in ulcer of the leg; but there is a something more. This is that peculiar state of body, that constitutional dyscrasia, which, for want of a better term, we must in the meanwhile call the "eczematous diathesis," a condition of defective nutrition which predisposes to the occurrence of catarrhal inflammation. In this condition we have frequently anæmia, yet not always, for some eczematously disposed persons are plethoric and ruddy. Granting this, there is one feature common to very many cases of eczema; and this, which has often attracted my attention, is specially insisted on by Bulkley in his admirable treatise on the management of eczema, which I cannot too strongly recommend for your study. This is a deficiency in subcutaneous fat. The skin of the sufferers from eczema is often dry and lax, indicating both a deficiency in the proper action of the sebaceous glands and absorption of the subcutaneous adipose tissue which pads and gives plumpness. Some individuals are naturally slender, some are scraggy and yet healthy; but a steady diminution in the oiliness and tension of the skin at an age when senile changes have not taken place is ominous of eczema in the future. Knowing this, we may sometimes ward off the impending danger by augmenting the fatty elements of dietary, and favouring their due assimilation by the administration of lactopeptine and of pancreatine, while we at the same time replace as far as possible the deficient lubricity of the surface by such emollients as dilute glycerine and vaseline. I am sure, were this pre-eczematous stage recognised and treated, the actual disease might in many cases be altogether prevented.

There is, however, in all cases of eczema lowered vitality, due to many enervating causes, whether these be deficiency of food, or overloading of the stomach, worry, anxiety, or over-fatigue, deficiency of light and air, or inactivity and indolence. This state of health has, in general, been gradually acquired, and not seldom a danger-signal, in the shape of limited, often transient, outbreaks of eczema, might have given, if noticed, warning in time. Very frequently a patch of eczema is developed in the first instance in the ham, or it may be just on the inside of the knee, over the head of the tibia, or on the shin—all situations where the earliest evidences of varices are to be met with. This is treated commonly with zinc ointment, and may for a time disappear or be kept in check; but unless the constitutional vice be discovered and remedied, or, owing to some change in the habits, surroundings, or circumstances of the patient having taken place, has spontaneously disappeared, further and more extensive mischief is apt to arise. The lower limbs are much exposed to changes of temperature, and their vitality is correspondingly reduced. Those affected with eczema of the legs very generally complain of cold feet and a general languor of the circulation. The cell and gland structures in the skin of the legs are less actively renewed, effete material tends to accumulate, and, like all worn-out tissue, more readily breaks down. All examples of eczema of the leg which have lasted for some time are accompanied by more or less pigmentation. This is due partly to transudation of the colouring matter of the blood as a sequence of the slowness of the current, partly to the continued irritation of the skin, the result of scratching which has been indulged in to relieve the itching. We cannot regard this increased deposit of pigment as altogether an evil, though disfiguring. Up to a certain point browning or bronzing renders the skin less sensitive, as happens to the faces of those exposed to the sun and weather. It is, in fact, one of those protective efforts of nature of which we see so many examples. The darker hue seems to veil the vessels and nerves, and thus shield them in some degree from the irritating agent, be this light or heat, and perhaps we may add, mechanical violence too. It may render our account of eczema more vivid if we cite a few instances of those forms in which it is met with as exhibited in actual cases. The following is an example of the mildest form:—

I.—A stout, fair, healthy-looking medical man, aged 40, who walked a good deal in the course of his practice, situated in a thickly-populated part of a large town, came to consult me about the state of his legs. On examining them there were seen numerous small erythematous spots, some slightly scaly, yet scarcely excoriated. Many of the spots had their seats round hairs, and all itched intensely. The skin of the legs was elsewhere smooth, but the limbs were a little puffy. None of the larger superficial veins were varicose: the smaller radicles, the intercommunicating plexuses, and the periglandular networks were alone affected. With exception of some degree of constipation, the health was excellent. Here a lotion consisting of ʒj. of liq. carbonis detergens, ʒij. of glycerine, and ℥viij. of water was directed to be sponged on twice a day, and a wineglassful of Hunyadi Janos water to be taken each morning on rising. He wrote me shortly after that the result had been very satisfactory. The glistening appearance, the œdema, and itching were nearly gone, and I heard subsequently that he was well, subject, however, to occasional recurrences of itching, which were quite kept in check by those simple means.

Here the disease was encountered in its mildest form, and antipruritic remedies, combined with a saline aperient water, which owes its activity mainly to the sulphates of magnesia and soda, and contains little chloride of sodium,—which latter, as correctly stated by Liveing, does not commonly suit eczema well,—served rapidly to relieve, and eventually to cure.

Females at the period of cessation of menstruation often suffer from symptoms of plethora. They become stouter, lose their activity, and not unfrequently are subject to intercurrent attacks of dermatitis of the legs of an erythematous type, which may induce an outbreak of eczema. This, unless early treated, is apt to lead to secondary changes in the skin of a nature difficult entirely to remove. The following case illustrates these, among other points, well:—

II.—Miss ——, aged 46, was, until three years before I saw her, slight and active, so much so, indeed, that she has walked thirty-six miles in a day without fatigue. With the cessation of the monthly periods, however, she rapidly put on fat, and then began to be attacked by inflammation of the legs of an erysipelatoid nature, which quite incapacitated her from walking. Even previous to the menopause she had remarked some puffiness of the ankles.

When first seen her face looked swollen, and had an erythematous or rosaceous flush on it, which also extended over the upper part of the chest. She seemed short of breath, though with exception of a rather rapid pulse, which exceeded one hundred beats per minute, there was nothing detected wrong with the lungs or heart. The tongue was slightly coated, the appetite impaired. Bowels regular, inclining to looseness at times. Some backache, but urine normal and plentiful. Both legs were œdematous, the right particularly, which was red, excoriated here and there, and crusted over with thin laminæ and scales. The left had red, bossy-looking, and somewhat elevated patches, which reminded one of erythema nodosum, scattered here and there between the knee and ankle.

She was directed to take a mixture containing digitalis, nitrous ether, and squill, to have the legs bandaged with Martin's solid rubber bandages, and a calamine lotion applied to the face. Under this treatment the face soon assumed a natural appearance, and the œdema of the limbs was lessened; but the skin of the legs first became smooth and glossy, then red and tender, and finally bullæ with easily lacerable walls formed. These latter were accompanied with much pain. A flannel roller was now applied to the right leg, and a cotton bandage to the left, with the indiarubber one over. The plan adopted for the left was found to suit admirably, and that leg gradually assumed a completely normal aspect; but even with the bandage beneath, cotton having been substituted for flannel, the indiarubber regularly caused bullæ to show themselves, so it was discontinued on the right leg, and in place of this the blebs were dressed with Kaposi's modification of Hebra's unguentum diachyli, kept in place by a bandage, the ointment being spread on strips of muslin. When these had become healed, a simple cotton roller was used, the legs having been dusted with French chalk, and Fellows's syrup of the hypophosphites substituted for the digitalis mixture. Finally, the skin was hardened by sponging with a lotion consisting of liq. carbonis detergens, glycerine, and brandy, and at the termination of two months the legs were perfectly well. Since then some slight threatenings of a recurrence have occurred from time to time. These have gradually become rarer, and latterly have ceased, while the health is excellent.

The following case illustrates a peculiar secondary change in the skin, which has not received the attention it deserves in most systematic treatises:—

III.—The Rev. M., aged 36, a clergyman of the Romish Church, who was healthy-looking, with good fresh colour, and resident in a country town, informed me that some time previously he had suffered from psoriasis, which had disappeared under the use of an ointment of chrysophanic acid. There still remained a thickened patch of skin behind the right knee, and two scaly-like spots below the patella, which had much the appearance of psoriasis. About eighteen months ago an eczematous eruption came out above the ankle of the left leg, and this has been permitted to spread till two-thirds of the skin between the knee and ankle are now involved. The skin is red, angry-looking, and infiltrated, and thinly covered with yellow crusts. The part feels hot to the hand, and annoys much by itching and burning at night. It presents an example of eczema rubrum in a highly inflamed state, in which all the tissues of the skin, even to the subcutaneous areolar tissue, are implicated. On the right leg there was some degree of papular eczema, and it was the appearance of this latter, quite as much as the condition of the left leg, which induced him to come to me. With the exception of habitual constipation, his health is excellent. A mixture containing sulphate of magnesia, iron, and digitalis was directed to be taken once or twice a day to keep the bowels open. The left leg was to be enveloped in cold starch poultices and kept elevated till the surface became clean, then dressed with unguentum diachyli (Kaposi) spread on lint, and carefully bandaged.

When seen a fortnight later, the poultices had removed the crusts, but the epidermis looked thin, tense, and glossy, and as if ready to break. It had much the aspect of a recent cicatrix, still red, not having yet passed into the condensed, white, permanent condition due to contraction of the new tissue expelling the blood, while the opacity of the connective tissue still further veils the subjacent bloodvessels. He complained that when the ointment was kept on for some time the leg became hot, and to relieve this a starch poultice had to be applied. This gave immediate ease. I now substituted for the ointment a calamine, chalk, and dilute hydrocyanic acid lotion, enjoining at the same time strict continuance of the bandages. The medicine kept the bowels in good order. I did not again see him, but the treatment was successful, for he sent me a note four months after to tell me he was well.

The peculiar scar-like state found in this case is a troublesome feature. It indicates that the inflammatory process has invaded all the structures of the skin, and that besides œdema there is plastic exudation. The part, when healed, tends readily to break down again unless the skin can be again rendered healthy, and therefore much care must be taken to cause absorption of the infiltration to render the cure a lasting one.

Eczema is, as already remarked, often found in association with various conditions of lowered vitality, and it is but natural to assume that the internal mucous membranes will, as well as the skin, share in the evil effects of this. The alternation of asthma and eczema has been often pointed out, and it has been insisted on that here we may have, not a pure spasmodic asthma, but a catarrhal state of the mucous membrane of the bronchi. Certainly sometimes with the complete cure of the eczema the asthmatic attacks also disappear. The following case, one of several similar ones, I have taken from my note-book:—

IV.—P. M., aged 17, a thin, ill-grown lad, came from one of the northern counties of Scotland. His mother told me he had had small-pox when five months old, two months after having been vaccinated, and that as a sequela of the variola he suffered from eczema, which lasted till he was two years old. When his parents removed further north, some years before I saw him, the eczema returned, and since then has gone and come again and again. When seen it affected the limbs alone. The skin was dry, harsh, hot, and infiltrated, the subcutaneous fat was deficient, and the skin seemed as if drawn tightly over the bones. Its surface was covered here and there with thin, yellow, friable crusts. Itching excessive, and scratching indulged in freely; tongue clean; appetite may be said to be voracious; pulse weak, 90. Often annoyed with attacks of asthma with accompanying bronchitis. Urine scanty. He was ordered warm baths containing starch, and subsequent envelopment of the affected parts in linen rags smeared with ung. diachyli (Kaposi); to continue cod oil, which he has taken for some time; and to have a diuretic mixture of citrate of potass and digitalis. In a week the legs, though still itchy, now secreted scarcely any fluid; the urine had become clear and copious. He was now put upon Parrish's syrup, with 6 minims of tinct. of digitalis with each dose. In ten days more there still remained some infiltration over the malleoli and at heel; elsewhere the skin had become smooth and pliant. The itching was gone. The appetite had become more natural, and he is cheerful; while a symptom which had previously existed, viz., drowsiness—due, no doubt, to imperfect assimilation—was less marked, and his asthma had not annoyed him. The recovery in this case was complete; and at least some months after he was well, both as regarded his eczema and asthma.

Other mucous surfaces are also found implicated in cases of eczema. Thus we may have menorrhagia, not climacteric, occurring in conjunction with eczema affecting the legs. Such cases belong to the neurotic division of eczemas. The cure of the eczema may be accomplished without relief to the menorrhagia; yet that may be checked by properly directed local and constitutional treatment. These cases are not unfrequently found in connexion with that form of malassimilation known as gout, though purely antiarthritic remedies do not seem to produce much, if any, effect. In such the os uteri is eroded, and no doubt there is endometritis of a catarrhal nature also. I have seen the tongue peculiarly irritable, and covered with white patches, leucoplakia, while in other parts the epithelium was swollen, red, or entirely absent, telling us pretty plainly how mucous membranes which we could not so easily see fared.

Some of the most troublesome forms of eczema when affecting the legs are those where the disease is limited to a small area—occurs, that is to say, in patches.

V.—A good many months ago Dr Littlejohn sent a man to see me at the Royal Dispensary who had two small patches of chronic eczema situated just below the right knee, on its inner side, at a spot where the veins are often varicose. The man was about 35, fairly healthy, and employed much out of doors. He had been taking iodide of potassium for some time, and, without my knowledge, continued it. The patches looked so dry, and in such a chronic state, that I thought I might venture to try the soap treatment of Hebra. Instead of producing only moderate reaction, however, this set up at once acute inflammation, and we were glad to discontinue it. I soon found that the mode of treatment which suited best was one strongly recommended by Dr Bulkley of New York, viz., sopping the parts well with black wash, and then, when this had dried a little, applying an ointment made by mixing ʒj. of oxide of zinc with an ounce of cold cream. Still, though improvement took place, the man did not get well, and it was only then discovered that he had continued all the time the iodide of potass, which had been prescribed for him before he came to the Royal Dispensary. This was at once stopped and mist. ferri comp. substituted in full doses, as he looked anæmic. This latter symptom was very likely due to the iodide of potass, which, when taken in cases unsuited for it, acts destructively on the red blood corpuscles. In this way he was after a time entirely freed from his eczema.

One more remark before I have done. In some cases of eczema, especially those which attack the foot, we are entirely baffled in our treatment until we render the skin sweet and alter its condition by antiseptic remedies.

VI.—A very severe example of eczema of the foot came under my care some little time ago. The patient was an elderly man otherwise out of health at the time. The whole foot and the lower third of the leg on one side was red, fiery red, tender, and itchy to a remarkable degree. The disease extended on to the sole, and there was seen a feature exhibited by eczema when affecting the latter situation. The anterior margin of the eruption, near the toes, instead of fading somewhat gradually, was sharply defined. A line of demarcation separated the sound from the diseased skin. This arises from the thickness of the horny layer here, so that the inflammation of the rete mucosum and corium is not visible through it, and does not make itself manifest externally till it has become so decided as to cause shedding ot the epidermis.

It was plainly a case for soothing remedies, and accordingly the foot and leg were enveloped in ung. diachyli made by mixing equal parts of lead plaster and vaseline, and spread on strips of muslin. A certain degree of improvement took place under this; then progress ceased and retrogression occurred. Not only did the inflammation become more extensive, but it was accompanied by a penetrating and offensive odour. To correct this a saturated solution of boracic acid was kept constantly applied on boracic lint, and the odour rapidly ceased. For the lotion an ointment recommended by Dr Thin was substituted. This ointment is made by dissolving boracic acid in glycerine to saturation, and then adding as much olive oil and white wax as will make a consistent ointment, or at least a thick cream. The foot steadily healed, and when it had been entirely covered with new epidermis for some time, and seemed in a condition to stand it, a spirit lotion containing a little glycerine and a very little liq. carbonis detergens was gently pencilled over it. Instead of hardening the skin, the tar set up fresh irritation, and had speedily to be laid aside, and the ointment, which we thought had done its work, resumed for some time longer.

This case shows how an unhealthy state of the secretions may, if uncorrected, maintain the disease indefinitely, for many forms of treatment had been tried ere I saw the patient; and also that even weak preparations of tar cannot be used with advantage in all cases, though apparently well suited for them.

With these remarks I must close. I have merely touched superficially on many topics connected with this subject, but what I have said may serve to indicate the general line of treatment which should be adopted.

ARTICLE II.—*Note on the Anatomy of the Pia Mater.* By Dr J. BATTY TUKE.

(*Read before the Medico-Chirurgical Society of Edinburgh, 3rd May* 1882.)

IN the most recently published standard work on anatomy, Turner's *Introduction to Human Anatomy*, we find the membranes of the brain described as threefold—the dura mater, the arachnoid, and the pia mater. I take the liberty of quoting largely from this admirable work, and of criticising its statements, as it is certain to contain the most recent and the most generally received opinion of anatomists.

The dura mater is described as a tough fibrous membrane, the inner surface of which has the appearance of a mucous membrane, and is covered by a layer of squamous cells. "The dura mater is well provided with lymph vessels, which in all probability open by stomata on the free inner surface." The description of the membrane concludes thus:—"Between the dura mater and the arachnoid membrane is a space of only a capillary lumen, containing a minute quantity of limpid serum, which moistens the smooth inner surface of the dura, and the corresponding smooth outer surface of the arachnoid. It is regarded as equivalent to the cavity of a serous membrane, and is named the *arachnoid cavity*, or, more appropriately, the *sub-dural space*."

The *arachnoid* is described as "a non-vascular connective tissue membrane of great delicacy and transparency, which envelops both the brain and spinal cord. *It is separated from these organs by the pia mater; but between it and the latter membrane is a distinct space, called sub-arachnoid.*[1] The free surface next the sub-dural space is smooth and covered by a layer of squamous endothelium. The opposite surface is connected to the pia by threads and membranes of delicate sub-arachnoid connective tissue which traverse the sub-arachnoid space and divide it into numerous loculi freely communicating with each other. The connexion is much closer opposite the summits of the convolutions than opposite the sulci between them, for the arachnoid does not dip between the convolutions: it is loose also opposite the interpeduncular space and around the pons, medulla, and spinal cord, in which localities, therefore, the sub-arachnoid space is most distinct. . . . . *Endothelial cells line the inner surface of the arachnoid, cover the outer surface of the pia, and invest the various bands and membranes which traverse the sub-arachnoid space.*"[1]

Of the *pia mater* it is said, "This tender *vascular* membrane consists of delicate connective tissue closely investing the whole outer surface of the brain and cord. It dips into the fissures between the convolutions. . . . . *The arteries of the brain and spinal cord ramify and divide into small branches in the pia mater and sub-arachnoid tissue*[1] before they penetrate the nervous substance, and the veins conveying the blood from the nerve centres traverse these membranes before they open into the blood sinuses of the cranial dura mater and into the extra-dural venous plexus of the spinal canal. . . . . The vessels which pass from the pia mater into the brain and spinal cord are invested by a loose funnel-shaped sheath, which has been described as forming the wall of a perivascular lymphatic vessel; but Axel Key and Retzius consider that the space between the bloodvessel and the sheath opens into the sub-arachnoid space, and contains sub-arachnoid fluid. A network of lymph vessels ramifies freely *in* the pia mater."

If we reduce these statements to a diagrammatic scheme (Figure 1), we have, 1*st*, the vascular dura mater; 2*nd*, a sub-dural space; 3*rd*, a non-vascular fibrous membrane, the arachnoid; 4*th*, a sub-arachnoid space; and 5*th*, a vascular membrane dipping into all the sulci.

Reference to the drawings illustrating this paper will, I think, convince the observer that a modification of this view of the membranes must be adopted. Certain of the sections from which these drawings were made were taken from the brains of monkeys recently killed, others from human brains. The organs were removed from the calvaria after careful reflection of the dura mater, all the other investments being left *in situ*, hardened in chromic acid, and thin sections were cut perpendicularly to the plane of the surface.

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[1] The italics are my own.

Study of these specimens shows that over the curved surface of each convolution a membrane exists investing it closely. This membrane, the pia mater, consists of two layers of a distinctly fibrous character, for the most part intimately bound together by connective tissue, so intimately as to be inseparable, and to give us every right to consider it as one membrane. *Between these two layers, and in the connective tissue, the vessels permeate. No membrane external to this exists except the dura mater.* But when this investment approaches a sulcus, the two layers separate, the outer bridging the fissure, the inner dipping into it and closely investing its surface throughout all its ramifications, being reflected at the extremities of the sulcus, and becoming continuous on emerging from it with the bridging layer. In the angular space thus formed the arteries lie naked, or at most are supported by very fine fibrous trabeculæ; but as they enter the brain substance they receive from the investing layer fine hyaline sheaths (Diagram 2).

It is true that over the sulci, over the interpeduncular recess, and over the wide gap between the cerebellum and the medulla oblongata, a purely fibrous membrane exists; but when we refer to microscopic sections an explanation of its true character is obtained. It is found to be the outer layer of the vascular pia mater, which in these positions is separated widely from the inner layer and bridges the fissures and spaces.[1] Over the cerebellum these two layers are much less intimately connected by interstitial connective tissue than over the cerebrum. Over the spinal cord the two layers are completely separated, the inner very closely investing the organ, the outer becoming thick and coarse, loosely enveloping the cord, and being separated from the inner layer by vessels and bundles of nerves as they enter or emerge. This thick, definite membrane is, however, distinctly continuous with the outer layer of the cerebral pia mater.

From these observations I am forced to the conclusion that a separate arachnoid membrane does not exist—that the name should be dispensed with, and, as a corollary, that the theory of the existence of a sub-arachnoid space should be departed from; that we should speak of only two membranes of the brain and spinal cord, the *dura mater* and the *pia mater*, and of two spaces, the *sub-dural space* and the *intra-pia-matral space or spaces.*

Slight consideration will show that something much more important than mere accuracy of anatomical description is involved in this contention, although that is in itself a not inconsiderable matter. The practically important question is, What relation do the pia-matral spaces hold to the vessels and lymphatics of the brain?

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[1] It has been suggested to me by Mr Symington that an analogue of this arrangement is found in the *falx cerebri, falx cerebelli, and tentorium cerebelli.*

Between each convolution a pia-matral space exists, and it is easily demonstrable by injections that they communicate freely with one another on the surface of the cerebrum by wide channels. Over the cerebellum and at the base of the cerebrum they become larger, but not actually continuous. Around the spinal cord the pia-matral space is continuous. In my opening statement I said that the inner layer of pia mater affords fine hyaline sheaths to the arteries as they enter the brain. This opinion was grounded on the writings of Robin, His, Fohmann and Arnold, Key and Retzius, Boll, Rindfleisch, and on my own observations. I present to you specimens which show the sheath as it enters the cerebral substance (Fig. 4), and as it loosely encapsulates the vessel in the interior of the brain. Although the existence of these perivascular hyaline sheaths is now an acknowledged fact in anatomy, the manner in which they debouch on the surface of the brain is not clearly stated, in consequence, I believe, of the prevalence of the theory of the presence of an arachnoid membrane apart from the pia mater, and of a sub-arachnoid space. Boll held that they empty themselves into a space which he called the great epi-cerebral lymph space, and which he believed to exist between the pia mater and the cerebral substance. This position is quite untenable, for the hyaline membrane is a prolongation of the inner layer of pia mater; how, then, can the channels they form debouch *below* that membrane? Key and Retzius ridicule this idea, but assert that the hyaline perivascular sheaths debouch into the sub-arachnoid space. It is needless to reiterate my arguments in proof of the non-existence of such a cavity; but admitting its existence for a moment for the sake of argument, how are Key and Retzius to overcome the difficulty of the intervening vascular pia mater, which must, if their theory be correct, be penetrated by the sheaths before they could reach it?

The simple and plain fact is that these channels debouch along with the vessels into the cavities of the pia mater, as shown in Diagram No. 2.

It is now pretty generally held that these conduits are lymphatics. Key and Retzius assert that by their means free communication is obtained between the ventricles of the brain and its outer surface. The anastomosis between the arteries supplying the tracts around the lateral ventricles and those entering the outer surface renders this statement easily appreciable. Obersteiner holds that by certain "spur-like" processes there is maintained a lymphatic communication between spaces surrounding each nerve-cell and the perivascular lymph spaces. He has proved this by injections. But whether we regard them as lymph conduits, or as channels for the transference of cerebrospinal fluid from the brain to the spinal canal, or as serving both purposes, the position I have asserted renders the route taken by fluid discernible. No patent route is open if we hold to the usual statement of a vascular pia mater encapsulating the cerebrum, on which is superimposed a fibrous arachnoid, for the simple reason that any perivascular conduit must needs penetrate the pia mater before it could reach a space between that investment and an arachnoid membrane. But if we hold to a vascular pia mater with broad interconvolutional spaces which communicate freely one with the other and with a wide intra-pia-matral space in the spinal canal, the transference of fluid is easily comprehensible.

To the pathologist the question is of great importance, as it involves the possible consequences to brain health which may be brought about by the interruption of the route by distention of vessels.

DESCRIPTION OF PLATES.

Diagrams.

FIG. 1. Projection of membranes and spaces according to the usually accepted anatomical description. V. D. M., Vascular dura mater: S. D., Sub-dural space or sac of arachnoid; F., Fibrous non-vascular arachnoid; S. A., Sub-arachnoid space; V. P. M., Vascular pia mater, dipping as a whole into a sulcus.

FIG. 2. Projection of membranes and spaces as indicated in the paper. V. D. M., Vascular dura mater; S. D., Sub-dural space; V. P.M., Vascular pia mater, outer layer bridging a sulcus, inner layer investing surface of sulcus, and affording fine hyaline sheaths to the vessels; × ×, A Pia-matral space, bounded by the inner layer investing a sulcus, and superiorly by the bridging layer: in it the vessels lie naked or receive support from trabeculæ; into it the hyaline sheaths debouch.

Lithographs.

No. 1, taken from a section of a monkey's brain, shows pia mater as a two-layered membrane at *a b*, and *a b*, and behaving as stated above. The cut ends of vessels are seen supported by trabeculæ; *x x*, Brain substance. × 80.

No. 2, from a human brain, shows a vessel in the pia mater, on the summit of a convolution, sending a branch into the brain substance, surrounded by a hyaline sheath. The sheath is represented somewhat too strongly. The communicating pia-matral space is shown between the fibrous tissue of the two layers. × 250.

ARTICLE III.—*On the Diagnosis and Prognosis of Idiocy and Imbecility.* By WILLIAM W. IRELAND, M.D., Home and School for Imbeciles, Preston Lodge, Prestonpans.

THE object of this paper is to point out those features of idiocy and imbecility which it is most important that the physician in ordinary practice should know. I have, therefore, no intention of going deeper into the pathology of the subject than what seems useful in illustrating my remarks or removing the possibility of erroneous ideas arising in the mind of the reader.

Fig. 1.

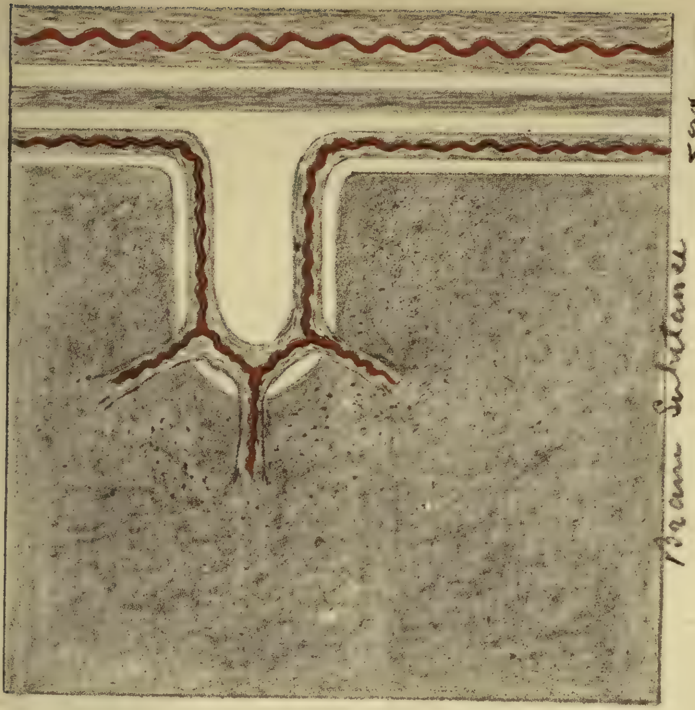
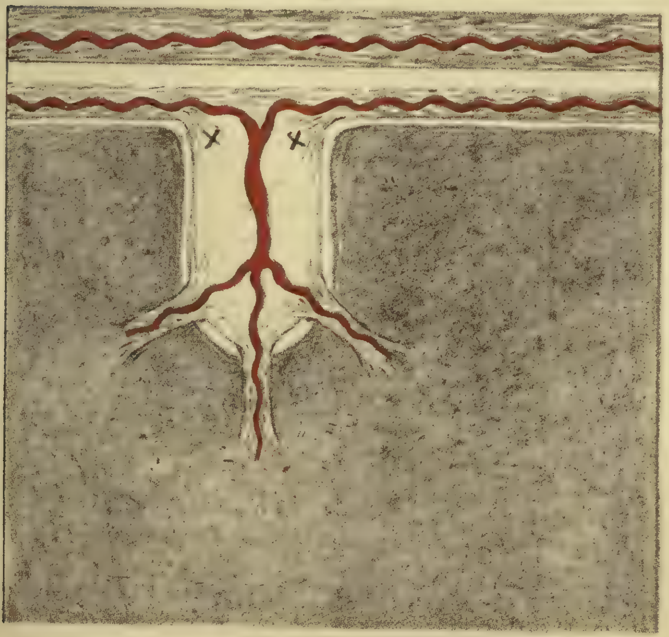

V. D. M.
S. D. Space
F. Arach.
S. A. Space
V. P. Mater
Brain Substance

Fig 2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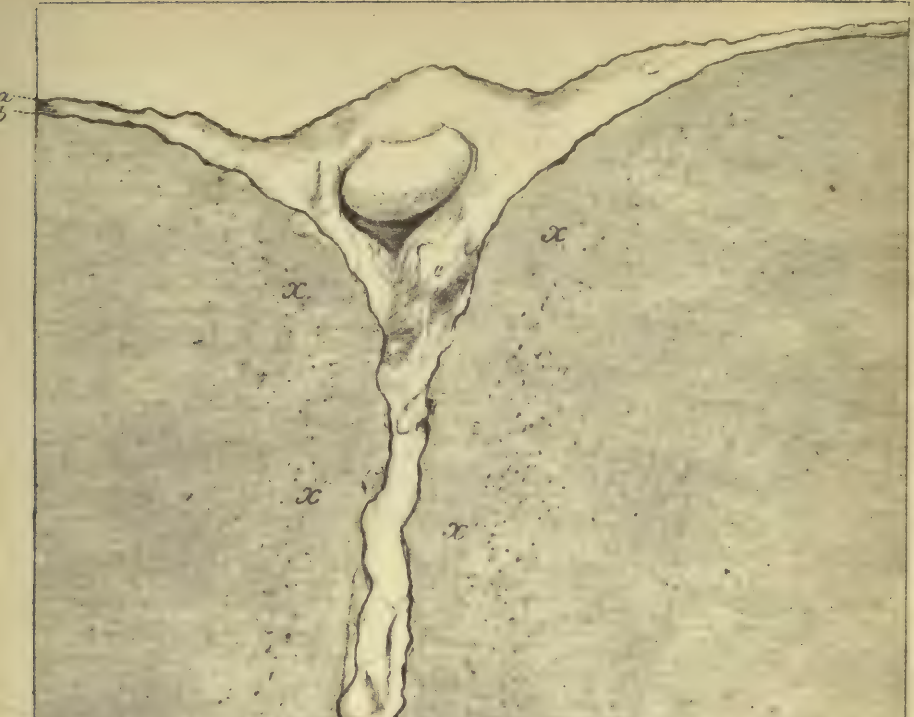

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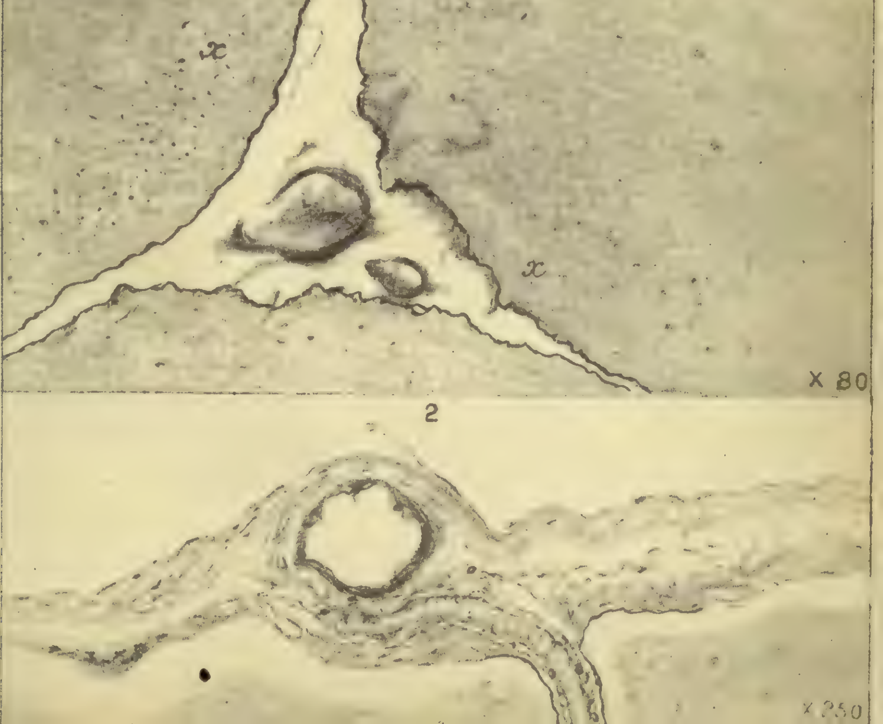

I. Diagnosis.

When an idiot or imbecile occurs in a family, the ordinary medical attendant is generally the first consulted. Perhaps he is already aware of the nature of the case, having attended the child from infancy, or treated it for some nervous disorder, of which he has now to consider the results. In some cases there is very little difficulty in the diagnosis: in others there is room for doubt. In any case the situation requires tact and management. The parents in general are extremely slow to recognise idiocy in their family, and apt to take offence should their medical adviser arrive at the truth too far in advance of their own suspicions; and even when their suspicions are fairly awakened, they are more anxious to get them allayed than confirmed, and sometimes do not bear well the unpleasant intimation that their child has such a serious deficiency. Very frequently the first symptom which startles them is that the child does not speak, though considerably past the usual time when children begin to utter words.

Here, of course, one should be on his guard not to confound an idiotic with a deaf child or with a simply backward or stupid one. The diagnosis between a deaf child and an idiot is generally easy, and need not detain us. There may, however, be additional complications which render it perplexing. Some idiots are deaf, many of them dull of hearing (often from otorrhœa), others are very inattentive to sounds.

I was once consulted about a child five years of age who had partial hemiplegia of the left side. One leg was shorter than the other. There was more power in the arm, which seemed to be gaining in strength. She was known to have had three fits. The head was rather small, and she had not attained the ordinary size of a child of her age. These symptoms indicated cerebral disease, and as she never spoke, the question arose, Was she deaf, or was she imbecile? or was imbecility added to deafness? At first I was unable to give an opinion, as the child was timid and resisted all my attempts to gain her attention. After she became more familiar with me, I could make out that the little girl was insensible save to very loud noises. She could not be awakened by a bell rung over her head, though she could hear it after she was awake. She was too lively, sharp, and noticing to be imbecile, though it was impossible so to probe her intelligence as to determine whether a certain amount of simplicity might not appear after her education was commenced. On this account, and taking the paralysis into consideration, I could not advise that she should be taught to speak in the German manner, but thought that she should be educated in the ordinary way in deaf and dumb schools by figurative signs, writing, and the finger alphabet. In teaching the deaf to speak after the German manner, the instructors generally manage to eliminate the slower children, and the results which are exhibited to the public are gained from persevering instruction bestowed on the sharpest children in the school.

It seems strange that an imbecile child could be mistaken for one simply slow in speaking; but apparently this is frequently done: at least many parents have assured me that when they have consulted the doctor about their child he told them that it would all come right. "Only wait for a year, wait for two years, wait till he is seven. He possesses all his faculties." The parents often give misleading information about the child's capacity. They will say, "He is very clever, only he does not speak; but he can understand everything that is said to him;" and when this statement is tested it will be found that the child can only execute some very simple command, such as to shut the door, or to pick up his hat. Sometimes the words have to be eked out with pantomimic signs, so that often the child is found not to understand more than a score of words. This, however, does not always prevent the parents making remarks disparaging to the doctor's skill when, after waiting for years, they apply to some other medical adviser, from whom the sad truth comes out that they have been feeding themselves on false hopes.

On being consulted about a possible case of idiocy, the physician should make careful inquiries about the following points:—the existence of neurosis in the family, such as insanity, idiocy, epilepsy,[1] or other nervous diseases, and the existence of constitutional maladies, such as consumption or scrofula. Of all known diseases, perhaps idiocy is most frequently propagated by heredity. As the admission of a constitutional disorder in the family is thought humiliating, it is not uncommon to get incorrect or evasive answers. Educated people are much less likely to lead a medical man astray, not only because they are in general more truthful, but also because they generally understand that anything which they reveal will not be repeated by a respectable practitioner. In asking about the health of the grandparents of the child, it should not be forgotten to ask about the collateral relations.

Dr Kerlin,[2] the medical superintendent of the Pennsylvania Institution for Feeble-minded Children, has found that consumption appeared in 56 per cent. in one or both families ancestral of the idiot child. Dr Grabham, of Earlswood Asylum, has found a history of phthisis in 22 per cent. of the parents or near relatives. Dr

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[1] In an interesting lecture, delivered before the section for Mental Diseases at the Medical Congress, Dr Lasègue described a form of epilepsy dependent upon malformation of the base of the cranium, which is indicated in the living by irregular or unsymmetrical form of the face. It appears about puberty. The professor had been often consulted whether there was danger of the disease being transmitted to the children. He believed there was no danger of this occurring; and where such marriages took place, which sometimes occurred (the lady being rich), he never found that they give birth to an epileptic child.

[2] See his excellent pamphlet on the *Enumeration, Classification, and Causation of Idiocy.* Philadelphia, 1880.

Shuttleworth, the medical superintendent of the Royal Albert Asylum at Lancaster, who has paid much attention to the question of drunkenness as a cause of idiocy, holds that it is not so common a cause as has been represented by Dr Howe and by the sensational writers who quote him. Dr Fletcher Beach, who has principally studied the cases drawn from the poorer classes in London received into the Darenth Asylum, is disposed to give a greater force to drunkenness in the parent as a cause. Before examining the question, it would be useful to know in what percentage drunkenness occurs in the population overhead. I certainly know villages where it is very common, and where there are few or no idiots; and I am disposed to believe that when it does appear as a cause, intemperance in drink does so by exciting other nervous diseases in the parents or grandparents. Should there be a record of some neurosis in the family, one must still be careful, as parents who are actually insane have not unfrequently had healthy children.

An examination of the head of the child often fails to help the diagnosis. Hydrocephaly and microcephaly will, of course, be recognised. The latter is a very rare form of idiocy, which is in the great majority of cases owing to disease, not to want of development, of the brain. In the most common forms there is often nothing peculiar either about the size or conformation of the head, and when irregularities exist, the same irregularities may be found with people who have all their faculties. Flatness of the occiput is one of the commonest deformities. Attempts to guess the amount of intelligence from the physiognomy are often unsuccessful. The countenance expresses the moral disposition better than the mental power.

The most distinctive accompaniment of genetous idiocy or imbecility is a deformed condition of the palate and irregular teeth. The distance between the molars and bicuspids on each side is narrow, and the roof of the palate is high, so as to invade upon the nasal cavity. This deformity has been variously named the vaulted, keel-shaped, saddle-shaped, or V-shaped palate. The irregularity is not always of the same form; but those who know the shape of the normal palate at different ages will hardly fail to recognise the abnormal form when their attention is aroused. The teeth are of irregular forms and sizes, or growing out of the usual places, or set at diverging planes to one another. Sometimes the palate may be normal and the teeth irregular. Sometimes the enamel is dotted with small holes. A good set of teeth is rare with idiots. They generally decay early, though with little pain. According to Dr Magitot,[1] of Paris, erosions of the teeth similar to those met with in idiocy have been observed to follow convulsions in infancy. This deformity of the jaw and irregularity of the teeth seem often associated with a want of symmetry of the bones of the base of the skull.

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[1] See his elaborate paper in the *Transactions of the International Medical Congress.* London, 1881. Vol. iv. p. 128.

Mr Oakley Coles has devised a scheme for giving greater precision to observations and descriptions of deformities of the upper jaw. With a pair of compasses he takes the base of a triangle from the distal surface of the second molar on each side, as near to the level of the alveolus as the third molar will allow. From this as a base the triangle is completed by drawing converging lines to the surface of the gum between the two central incisors. He notes especially the breadth at the base between the second molars, and the breadth between the second bicuspids. The measurement between the centre of the basal line and the apex, between the incisors, of course gives the length; and the height of the palate is determined by a vertical line drawn from the middle plane between the bicuspids up to the palatal arch.

He compares the relative distances in different cases between these several points in the triangle, and notes whether the bicuspids fall within or without the converging lines, for Mr Coles has discovered "that the best type of well-developed English jaw will give an equilateral triangle as the result of measurements taken in this way."

The deviations from this standard figure are duly classified, defined, and named; but for further particulars we must refer to Mr Coles's pamphlet.[1] To the form known to dentists as the V-shaped palate he gives the name of the lambdoid palate, from the Greek Λ. It is, he remarks, a class alone, without normal parallel. After noting the prominent markings of the mucous membrane of the mouth, Mr Coles tells us that "in a typical case we have a base line of 56 m., a length of 43 m. from base to apex of triangle, and an interbicuspid measurement of only 28 m., falling within the sides of the triangle; the central and lateral incisors seem rotated, and the palate presenting the typical wedge-shaped outline, the vertex being above the normal plane, and the soft palate too short to touch the posterior wall of the pharynx. Although it is not essential to idiocy that this deformity should exist, still it is tolerably certain that the lambdoid arch is rarely seen except in connexion with low mental development, and especially where the idiot is microcephalic."

In another place Mr Coles remarks, "After carefully examining the work of various writers on the subject of microcephalic idiocy, there seems sufficient evidence to justify the belief that premature ossification of the sutures is the rule in the majority of these cases (of microcephaly); and we may therefore assume, if we cannot absolutely conclude, that this influence operates powerfully in the production of the dental deformity known as the lambdoid jaw; and this view is held by Virchow, but it is combated by Dr Langdon Down and Dr Ireland."

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[1] *Deformities of the Upper Jaw: an attempted Classification of them.* By Oakley Coles, Lecturer on Dental Surgery and Deformities of the Mouth to the National Dental College, etc. Reprinted from the *Transactions of the Odontological Society.*

It is about twenty years since Virchow gave out the theory that premature ossification of the upper sutures of the cranium was, in many cases, the cause of microcephaly, though he admitted that microcephaly also occurred where the sutures were open. Since then, so many cases of microcephaly with open sutures have been published, that it does not seem too bold to hope that the veteran pathologist has modified his views. This does not seem a fit place either for citing arguments or authorities on the question, so it may be enough to remark that I cannot see what causal connexion there is between closed sutures and a lambdoid palate, and that the instances of vaulted palates studied by me have not been associated with microcephaly, but with heads of moderate size. As far as I know, though this deformity does occur with microcephales, as in the so-called Aztecs, it does not occur in the majority of cases. Let Mr Coles look at the plates in the monographs of Vogt and Bischoff, and he will see that the palates are all flat. The subject of the connexion of degeneracy of race with irregularities in the jaw and decay of teeth is one of great interest both to the physician and the anthropologist. It is therefore gratifying to see that Mr Coles and other eminent dentists[1] are busy making observations which may in the end lead to important results.

It has been observed that though congenital idiocy and congenital deafness are not commonly met with together, the causes are often similar. I venture to call the attention of those medical men who have to do with the latter deficiency to the appearance of the palate. I once examined the mouths of a number of pupils in a school for the deaf and dumb, and found an unusual number of high palates in those who were stated by the teacher to be born deaf, but since then I have had no opportunity of extending the inquiry. The vaulted palate occurs, though rarely, with people who are not at all imbecile, and is wanting in many cases of born idiocy. Still it is a very frequent accompaniment of idiocy. Other peculiarities met with in idiots much oftener than with ordinary people are deformities of the toes and fingers, one or two toes often being smaller than the rest, strange shapes of the ears, wad-shaped fingers, hernia, nystagmus, squinting, and coloboma iridis.

It has been found, by exact observation, that the idiot child is on the average about two years behind an ordinary child in bodily growth; and puberty comes on several years later; sometimes it does not appear at all. In some cases, especially belonging to the lower grades of idiocy, the temperature is below the normal; the pulse is so weak that it is difficult to count, and the respirations are irregular. It is strange to see these blighted children live on year after year with the ordinary functions of vitality going on in so feeble a manner. Dr W. Bechterew,[1] of St Petersburg, who has made some careful observations on the loss of temperature in idiots, finds that the increased generation of internal heat which occurs with healthy people immersed in a cold bath does not follow with the weak-minded. He is disposed to think that this deficiency in the thermogenic mechanism of the body is owing to a lesion of that portion of the brain which presides over the regulation of the bodily heat, placed by some physiologists close to the median cerebral convolutions. However this may be, idiots lose heat more rapidly, and do not generate it so quickly. Their power of resisting cold is feeble, like that of infants, but they have not the same rapid reaction, and are not nearly so subject to acute inflammations of the air-passages. It seemed to me that the approach of phthisis was not so well indicated by a rise of temperature as in normal children. There are cases, as in traumatic idiocy, where the brain alone is diseased; but in most cases of genetous idiocy, and in many apparently resulting from nervous disease in infancy, the whole bodily machinery seems out of gear. Not only are the wheels of being slow, but they work out of harmony with one another. The strumous diathesis is very common, manifesting itself in glandular enlargements, abscesses, or sores, and in ophthalmia, otorrhœa, and skin eruptions.

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[1] See the paper of Dr Norman Kingsley on "Civilisation in its Relation to the Decay of the Teeth," and the discussion thereupon; and the inquiry of Mr Mummery "On the Causes of Mental Decay," in the *Transactions of the International Medical Congress*, vol. iii. pp. 533–541.

Lord Derby has remarked, with his usual philosophic insight, when speaking of the work to be done in an institution for imbeciles, that "the greater part of the value of an asylum or an hospital consists in its usefulness as a school where the particular complaints there treated may be studied;" and the close study which such establishments have enabled the resident medical officers to make has been useful in adding much knowledge to an obscure subject, and promises yet to add more. In this unfortunate but interesting class there are many peculiar manifestations of perverted nutrition and disordered nervous action. There is a tendency to convulsions, manifested by fits occurring now and then, sometimes at intervals of many years. There is a great variety of nervous disorders, such as obtuseness of special senses, or anæsthesia of different points of the surface, profuse salivation, automatic motions, athetosis, or paralysis agitans. The tendency to insanity with imbeciles is much greater than with the same number of ordinary people. It generally takes the form of periodical outbursts of sleeplessness, irascibility, or maniacal fury. When put into asylums, imbeciles often take on or imitate the manners of the lunatics by whom they are surrounded.

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[1] W. Bechterew, "Calorimetrie bei Geisteskranken," *St Petersburger Medicinische Wochenschrift*, Nos. 38 and 39, 1879.

A medical witness, if examined about a pauper idiot, will likely be asked whether he thinks the case to be a congenital one; for if this can be held, it generally fixes the settlement to the parish in which the idiot was born. Unless there is a very complete medical history, it is difficult to answer this question with anything like certainty; but should there be the characteristic deformity of the palate and teeth, the probability would be strong, and this would be much increased by the existence of hereditary neurosis in the parents, and by the occurrence of the rarer concomitant deformities, and by the absence of all history of nervous diseases known to be causes of idiocy in early life.

The only kinds of idiots in this country which could safely be put down at first sight as certainly congenital are the microcephalic and the Mongolian. The first class would, of course, be recognised by the unusual smallness of the head; the second by the characteristic appearance. The head is obtusely rounded; the eyebrows have the outward slanting turn characteristic of Chinese drawings, owing to obliquity of the outer superciliary margin of the orbit. The nose is low at the bridge and short; the tongue hacked and rough, owing to the abnormal size of the fungiform papillæ. The vaulted palate is common with this variety. The stature is short, the figure squat, the fingers and toes stunted. The general appearance recalls the Mongolian. In the mental character there is a deal of passive obstinacy; the intelligence is generally very low. In the male the testicles are wanting or rudimentary, or there is only one. They generally die of phthisis, so that it is very rare to see a grown-up Mongolian idiot. In Scotland about three per cent. seem to belong to this variety.

Idiocy is very often caused by nervous disorders in early childhood. The most common of these are fits, mostly occurring at teething, but sometimes before it. In this case there is generally a pretty clear history. The child has been seized with fits rapidly succeeding one another, so as to place its life in great danger. It recovers, with permanent injury to the functions of the brain. The fits may pass away, or the child may remain epileptic for life; but it must be remembered that though the occurrence of eclampsia, epilepsy, hydrocephalus, or paralysis may explain the causation of existing idiocy, they do not actually prove its existence, for we may have all these diseases without idiocy necessarily following: hence one ought to be cautious about the diagnosis of idiocy in early life. Prolonged illness becomes a cause of mental weakness even in adults, and the brain, like other organs, has got wonderful recuperative power. In those few cases seen by me where idiocy was recognised very early, the child was dull and inanimate, let its head fall to one side or other, and if put on the ground, it did not cry or try to right itself. It was not noticing, and was slow of learning to grasp. Slavering is very common with such children. The statements sometimes met with in books about instinct being more powerful in idiots are quite erroneous; on the contrary, it is weaker, as was long ago noted by Esquirol. Idiots are late in walking as well as in speaking; but it is only in cases of extreme fatuity that they fail to learn to walk, if the spinal cord be not involved. Dr Mierzejewski of St Petersburg, who has deeply studied the pathology of idiocy, says that where the median convolutions are deficient or isolated from birth, the child is unable to use the limbs, no motor impulse, even if conceived, being able to reach the terminal motor apparatus. He describes a case of the kind, and refers to others.[1] Mr Hutchinson lately brought before the Pathological Society of London[2] a child seven years of age, with an idiotic expression, who could only move slightly all the muscles of the face and limbs. Dr Hughlings Jackson had diagnosed double hemiplegia, the conditions being quite symmetrical on both sides. Dr Jackson believed that it was due to a cyst situated in the motor zone on each side, and that the cysts were probably secondary to an earlier thrombosis. Dr Warner reported that he had seen two cases of double hemiplegia in children which appeared to be congenital. He had made a post-mortem examination of a child in whom there was bilateral defective development of the convolutions behind the fissure of Rolando. Double hemiplegia had existed from birth. These interesting cases are of very rare occurrence, and I have not observed any cases in which motor deficiencies could be traced to localized cerebral lesions, save one of paraplegia supervening upon an abscess in the centre of the right hemisphere. The ordinary motor deficiencies of idiots seem to be owing to mental incapacity.

In general, unless imbeciles are subjected to very careful instruction, their gait is awkward; they learn to walk in the easiest manner, which they never try to alter or improve. I have seen imbeciles who were nearly grown up totally unable to perform such simple motions as pronation and supination of the forearm, but who, on being taught, soon learned to do so. The same awkwardness applies to the hand. The best and earliest sign of idiocy is the deficiency of grasp. The hand is flapped or vibrated about instead of being employed to seize or obtain an object. The machinery of the human body, adapted for a being of superior intelligence, is too complicated an apparatus for an inferior one.

A large number of idiots remain mute simply because their ideas are too rudimentary to need expression. In general the intelligence appears somewhat greater than the faculty of speech. You must not expect a word to come to fit every idea: there must be a certain accumulation of ideas before any words are uttered. For example, an imbecile may distinguish colours without being able to name them, desire articles without being able to ask for them, and know all his companions without being able to call them by name. In some rare cases the ideas attain a certain complexity: these I have called aphasic mutes; but the general rule is, that when the storage of ideas is at all considerable, the faculty of language appears. Sometimes it is much retarded, occasionally as late as seven or eight. I have known an instance of an imbecile boy beginning to speak at nine, but never met with one where speech came after ten years of age. On the other hand, I have seen a case where speech was so much impeded by defect of command of the vocal apparatus with hemiplegia, that the patient was erroneously believed to be imbecile. If the child can speak, the degree and manner in which words are used form the best guide of his mental capacity. Esquirol's psychical classification of idiocy and imbecility is based upon the degree in which speech is exercised. It is true that some imbeciles are more voluble of talk than others of more mental power, and this holds good with many people who deem themselves wise enough to direct others. Still, there is no doubt that when the imbecile can talk freely, it becomes comparatively easy to determine the degree of stupidity. Conversing with a man is one of the best and easiest ways of arriving at an idea of his general ability. Imbeciles are almost always very unskilful in counting, and it requires an enormous deal of trouble to teach them. On the contrary, they are fond of music, and often catch up easy tunes. Their parents often cite this as a proof that their mental powers are not so deficient as might appear.

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[1] *Contributions à l'Etude des Localisations Cérébrales Observation de Porencephalie fausse Double*, par le Professeur Mierzejewski. Paris, 1881.

[2] *British Medical Journal*, 11th March 1882.

A new difficulty in the diagnosis turns up when the deficiency is of a slight character. There is sometimes a question whether a young person is imbecile or only grossly stupid. He may present none of these irregularities of conduct or vagaries of reasoning, delusions, or hallucinations which indicate insanity, and nevertheless he may be so unfit to conduct himself in a proper way, adding the passions of youth to the intellect of childhood, that it is necessary to have some legal control over him. The difficulty often appears when the parents are dead and when the young person becomes entitled to property. For such cases it would be difficult to lay down any criteria. The medical attendant, if consulted, will perhaps, in addition to his estimate of the mental powers of the individual, be able to point out some physical peculiarity or some nervous disease indicative of imbecility.

The case of Mr Windham, a good many years ago, caused much discussion in the law courts. He was a young man of distinguished connexions, who was entitled to come into a large estate, but showed great lack of mental and moral guidance. He contracted a marriage with a woman whose conduct seemed quite at variance with such a compact, but who was exacting in the matter of settlement. His relations tried to get him declared incapable of managing his affairs. Doctors, of course, appeared on both sides, and those who were inclined to certify the young man as imbecile were abused in some of the newspapers. It was decided that he was capable of managing his affairs. In this case there was a vaulted palate. Medical science will probably never be exact enough to prevent such difficult questions from becoming a source of profit to lawyers, a class of men who generally spend money well and invest it prudently; but unless parents and guardians wish that their money should be so spent, it is expedient that they should take timely consideration of coming eventualities, and see that everything is done to avert such issues.

II. Prognosis.

It may be asked, Is the whole brain diseased in idiocy, or only a part? I do not think that we are sufficiently advanced in the study of the pathological anatomy of the brain of idiots to give a direct answer to this question. In some brains very extensive lesions or alterations are discovered; in others the lesions seem only partial; but in others, again, nothing abnormal has been made out, though most pathologists will be disposed from analogy to believe that this is only owing to the imperfection of our existing means of investigation. It seems likely enough that in some cases portions of the brain still remain healthy. Goltz[1] found, in his recent investigations, that when he removed a great portion of the hemisphere on one side the animal did not become idiotic or demented; but if he removed portions from either hemisphere, the animal showed a diminution of mental power, with loss of tactile sensibility and awkwardness in its movements. We may therefore suppose that in idiots who improve under instruction, where the whole cerebrum is diseased, it in great part recovers its tone by being brought into healthy exercise, and that where a part still remains sound it is thrown into more vigorous exercise than the rest, attracts a greater supply of blood, and gains a more vigorous nutrition than the surrounding parts. We may fairly infer that the improvement will be influenced by three circumstances,—the nature of the existing lesion, the possibility of ensuring that the brain will receive no further injury, and the propriety of the stimulus applied to the nutrition and function of the organ. To ascertain the extent of the lesion, come and gone, which has robbed the child of the intellectual powers it would otherwise have enjoyed is very difficult; nor would it be easy to formulate the knowledge on which a conclusion should rest. The diagnosis of a disease may be made by seizing upon some recognisable symptom or group of symptoms; but the prognosis in most diseases can only be made from a lengthened experience of the course of many cases carefully studied. It is what Dr John Brown has called the middle propositions, which every craftsman learns from practice, that here come into request. Thus prognosis is the highest test of medical skill.

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[1] *Ueber die Verrichtungen des Grosshirns*, von Friedrich Goltz. Bonn, 1881.

One who wishes to know the matter thoroughly will not be content till he has made himself acquainted with all that is known on the pathology of idiocy. In the degree of the mental deficiency we have a fine test of the extent of the lesion; and in our knowledge of the causal disease we have an idea of the probability of its effects being permanent, or whether they may be expected to pass away, at least in part, or are likely to hinder our efforts at mental improvement.

Thus we know that where the deficiency is congenital the prognosis is often better than where it is traceable to diseases occurring in childhood, that great improvement in the intelligence often follows improvement in the general health, as in the successful treatment of strumous and anæmic conditions. Thus at Larbert the miserable children brought from the closes of the Cowgate and Saltmarket on first admission improved much more than those who came from country villages, whose tone of health was good at entry.

The effects of convulsions at teething are liable to remain, so that eclampsic idiocy has an unfavourable prognosis. Hydrocephalus, when it has ceased to advance, leaves a fair chance for improvement, unless fits occur, which is a bad complication.

Since my book on idiocy and imbecility was written, I have come to set a higher value upon the view of my friend Dr W. A. F. Browne, that cases of epileptic imbecility, when the epilepsy is successfully treated, form the cases in which there is most improvement. It would take up too much time to give instances at length, but I have had a number of epileptic patients where the fits entirely ceased, and where there was a very remarkable improvement in the mental condition. In other cases the number of fits was clearly diminished by medical treatment and regimen, while in a considerable number no benefit was obtained. In epileptic cases no time should be lost in putting the child under proper medical treatment. Out of fifteen deaths in ten years, two children died of exhaustion from fits, but I never lost any in the status epilepticus, though death sometimes seemed imminent. Many of the epileptics, also, made considerable improvement under teaching, though, as a rule, epileptics are eccentric and difficult to manage. In one of the most improving cases I had, a boy afflicted from infancy with chorea, great amelioration took place after the successful treatment of the nervous disorder. The boy was taught to earn his bread at brushmaking. In paralytic imbecility there is often a great improvement, especially in the mental symptoms. The individual symptoms of the case require careful study and a variety of knowledge and resource in treatment. It has been proved by the experience of forty years that children of defective intellect are susceptible of very gratifying improvement if subjected to an education consisting in the wise regulation of their whole life and habits, the treatment of their peculiar diseases going along with persistent training on physiological principles, conducted under the direction of persons well versed in hygiene and the educational art. In considering the amount of improvement, one must always remember the grade at which the training commenced. Critics have sharply disputed the assertions of those who claimed to have made cures of imbecility; but if a child whose intelligence was a few degrees below the boundary line between stupidity and imbecility is raised so far as to pass it, such an improvement can fairly be called a cure.

There are a large number of cases in which the mental fatuity is so complete that training will never be of any use; there are others where it can go no further than habit teaching, forming habits of cleanliness—a thing, no doubt, of considerable importance, both for the comfort of the idiot and those who have the care of him, and which, by the way, is a quite different thing from simply keeping him clean. In reading over the works of the late Dr Seguin, one is struck by the hopeful way in which he approached cases which seemed to promise little or no improvement. A good deal may sometimes be done in the very worst cases; but this requires an amount of effort and attention and the devotion of time which can only be commanded by those parents who are in affluent circumstances.

It may be said, as a general rule, that where the fatuity is very deep and the child cannot so interpret the senses as to produce voluntary motions, but is a mere passive recipient of sensation, all training is useless. Where walking is late and the child is mute, where it is passive or given to automatic movements, the grasp not firm, and the attention difficult to fix, the prognosis is unfavourable; but where the child commences to speak before six or seven, where he is active and noticing, and capable of sustained attention, a good deal of improvement can be expected. Where speech is free and the mental manifestations diversified, the prognosis depends upon the degree and character of the intelligence, the bodily health, and the hopes of improvement in casual or concomitant diseases.

In training the imbecile one need not expect success where the conditions, in the opinion of those who are acquainted with the subject, promise at least a partial failure. To gain a full measure of success, the training should be begun when the need of it appears, and carried on as long as the need exists, and not for five years, beginning at one age or other and ending abruptly. The training must include a regulation of the whole life and habits and the evolution of the whole intellectual and moral being, not the narrow circle of the ordinary schoolmaster. The teaching must be no make-believe, but earnest and painstaking, and carried on in an enthusiastic and hopeful spirit. One has to combat with a gross notion, that because the capacity of the pupils is low, or rather, perhaps, because the results can never be very high, any make-shift of a teacher obtained at poor wages will suffice. If the thing is not worth doing well, it had better not be attempted at all. The art of the teacher must augment with the obtuseness of the pupil. A very clever man will teach himself. In universities, where the highest minds resort, teaching is at its minimum. Within two generations the art of the educator has made great strides towards improvement; and the physiological training devised for idiots by Dr Seguin is the result of consummate study and practice of the art. People of the Gradgrind stamp will always ask, *Cui bono?* but, in reality, imbeciles are much better and happier when their intellectual power is increased by exercise, and when they have acquired habits of manual dexterity. This is to be done by teaching them sometimes one trade, sometimes another; for they are not all fit for one occupation. It by no means follows that the trouble of teaching is thrown away because, in an overpeopled country where hundreds of skilled artisans are idle, the feeble-minded often fail in getting remunerative employment. One of the main reasons for teaching imbeciles to work is the formation of habits of attention and industry. Work with them must become a habit till idleness ceases to be agreeable, and a pleasant occupation is given to them for life; and this remark applies as much to the children of the rich as of the poor.

ARTICLE IV.—*Case of Pregnancy in a Woman at the Age of Sixty-two.* By W. JOHN KENNEDY, M.D., Dalkeith.

(*Read before the Edinburgh Obstetrical Society, 25th January* 1882.)

CASES of pregnancy occurring in women who have passed the half century, and more especially in one who has borne over a score of children, are undoubtedly of extreme rarity. Though their interest probably concerns the medical jurist more than the obstetrician, still I trust that no apology will be required for now laying before the Society a brief notice of a case which came under my personal observation, believing that it will be of interest to the Fellows generally, and may also be the means of leading to a little healthy discussion. It will, at the same time, serve the purpose of placing the case on record.

Early on the morning of 29th November 1880 I was summoned to attend Mrs M., residing in Back Street, Dalkeith. Patient was sixty-two years of age, her catamenia had generally been regular (the last occurring in the middle of February), and she was in her twenty-third pregnancy. On arrival, I found labour going on naturally, os well dilated, pains strong and regular, and the head presenting. Having waited a short time, and finding that the expulsive powers showed no signs of rupturing the membranes, I punctured them, after which four or five pains sufficed to expel the child. The uterus contracted well, the hæmorrhage was normal in amount, and the placenta was removed within five minutes after the birth of the child. There was nothing particular to remark about it, except the unusual thickness and toughness of the membranes. The child was a well-developed, healthy male, and rather above the average size.

Remarks.—So far as the actual labour is concerned, there is nothing calling for observation, the patient having had a quick and comparatively easy confinement. The interest of the case lies in the woman's advanced age, the long continuance of menstruation, and the large number of children she had borne. To the medical jurist the case has further an important bearing on the question of legitimacy, as tending in some measure to determine the age at which a woman may bear a child, though, of course, it by no means proves that conception may not take place at even more advanced periods of life.

Mrs M. (*née* Jessie Boyd) was born at Selkirk in October 1818, or, as she says with evident pride, just three years after the battle of Waterloo. Her father was a major in the army, and she had been with him in America and India, and came home from the latter country at the age of seventeen. She was married in 1838, and her first child was born in the same year. Her husband was killed by an accident soon after the birth of the child. She married again about two years afterwards, and by her second husband had *nine* children (once twins) and two miscarriages. After the death of her second husband she again married, and by this third husband had *eleven* children at term, the last being born, as above stated, on 29th November 1880. The child preceding this one was born at Arbroath in 1874, and between the two she had a miscarriage in November 1878. During all this time she had, as a rule, menstruated regularly when not carrying a child.

Naturally, the first question that arises in one's mind is, Are the *data* on which this woman's age is set down at sixty-two correct? In regard to this, I beg to call your attention to the following points in evidence:—

1*st.* The statements made to me by the woman herself. These were given freely and explicitly, and the most careful cross-examination entirely failed in producing any contradictions. Besides, there was no possible object to be gained by the woman fabricating such a remarkable history as that given by her.

2*nd.* The fact that Mrs M. was a nurse under me in 1870, when she said that she was over fifty; and certainly she had quite the appearance of a woman of that age.

3*rd.* The number of confinements which she had had at term, namely, twenty (one twin), with the addition of three miscarriages.

4*th.* The fact that in June 1879, when her third husband applied to the parochial board at Selkirk for relief, he stated his wife's age to be *sixty* years, *i.e.*, sixty-one in the following October. (The schedule which was then filled up is now in my possession.)

From a medico-legal point of view, I venture to think that this case presents some features of special interest. Whilst it is impossible to lay down a hard and fast rule as to the age beyond which a woman may not conceive and bear a child, still every well-authenticated case of pregnancy at an advanced age is of value, as showing how late in life a woman may have, and actually has had, a child. It may be said roughly that the child-bearing age in woman ceases between forty and fifty; but as impregnation may take place at exceptionally early periods of life, so it may also occur at ages considerably beyond fifty. From a table given in Taylor's *Medical Jurisprudence* (1865, page 876), I find twelve cases quoted at ages from fifty to fifty-four. In the same work there is also a case mentioned in which a healthy woman bore a child at the age of sixty, menstruation having continued up to that time. Two others at sixty-three and sixty-five are noted, but their authenticity is doubted. He also gives two cases, recorded by Haller, in which women at sixty-three and seventy bore children.

The importance of accurately recorded cases of women giving birth to children at these advanced ages has a special bearing on the question of legitimacy, but into this we cannot at present enter. Suffice it to recall the well-known "Douglas Peerage" case (1767–69), in which the claimant's legitimacy was disputed, *inter alia*, on the ground that the reputed mother had passed the child-bearing period at the time of the birth, she being then in her fiftieth year.

Besides giving birth to a child at the age of *sixty-two*, there is another point in Mrs M.'s case which appears to me to be of interest, viz., the regularity with which she went on conceiving after she had passed the ordinary child-bearing period. This will be best shown by giving in a tabular form the dates of her last seven conceptions:—

Year 1865, .	. Age 47
„ 1867, .	. „ 49
„ 1869, .	. „ 51
„ 1871, .	. „ 53
„ 1874, .	. „ 56
„ 1878, .	. „ 60 (miscarriage)
„ 1880, .	. „ 62

The only case of a similar nature which I have been able to find is one quoted by Orfila, in which a woman had her first child at the age of forty-seven and her last at sixty, five others being born between these dates (Taylor's *Medical Jurisprudence*, p. 875).

The long continuance and general regularity of menstruation in Mrs M. are also noteworthy. This function may be stated, as a rule, to commence about the age of fifteen, and to terminate about forty-five. There are many instances, however, in which it has occurred at an earlier date, and it has even been observed in childhood. Similarly it has been noted as occurring at periods of life considerably beyond forty-five. The power of procreation may be said generally to run *pari passu* with menstruation, so that as long as the latter function continues in activity there is reason to infer that a woman may conceive. Cases in which menstruation has been observed late in life are frequently found not to have had the function established until long after the usual period for its commencement. Probably the most remarkable case of prolonged menstruation is that quoted by Orfila, where it continued until the woman reached the age of *ninety-nine,* the function having been established when she was in her twentieth year. In the present case the menses first appeared in India at the age of thirteen, and continued with remarkable regularity during the intervals of child-bearing.

The large number of children borne by this woman is also interesting, she having had *twenty-one* children at term, twins being borne on only one occasion. In relation to the question of fecundity in women, I have just heard of three cases in Somersetshire, through the kindness of my friend Dr Hine. In two of these the mothers were cousins, and had borne *twenty-four* and *twenty-five* children respectively, twins occurring on several occasions. In the third case the lady had ten children at term in the course of fourteen years. All these were suckled by her (except the last), thus showing that conception may take place during lactation, and adding one more instance to disprove the popular notion usually entertained upon this subject.

ARTICLE V.—*Obstetrical Observations.*[1]—*Prolapsus of the Funis.*

By Dr G. HAMILTON, Falkirk.

(*Continued from page* 994.)

OF this accident, or deviation from normal labour, which has so often proved fatal to the child, I have, fortunately for my patients, had comparatively little experience; and my only reason for adverting to it now is, that, when it does occur, every surgeon ought to be prepared to use the most efficient means we have at our command to save the child's life.

In the few cases that have occurred to me, I may say that I have pushed the funis up within the uterus, and kept it up as best I could; and, as soon as the head, when the presentation was vertex, came within reach, I have delivered with the forceps.

Of late years the postural treatment has been introduced, and seems to have been very successful; but it so happens that since I first heard of it I have had no opportunity of personally testing its efficacy. It undoubtedly possesses the one great advantage that it requires no apparatus for its application, and on this account, *when it can be used*, ought certainly to have the precedence of all other treatment. This being granted, the accoucheur has still to take into account the various accidents and complications that may occur, and the tempers he may encounter in conducting protracted labours, and it may therefore be not altogether a work of supererogation to *keep in readiness* the best means available should the postural method fail. On this account, I beg to suggest, with great diffidence, the following, in addition to what are usually found in works on obstetrics, as likely to assist the surgeon in such cases:—

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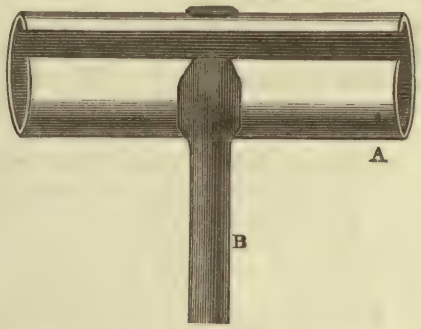
[1] In the first part of this article, in our last number, p. 994, line 25, *for* "spine" *read* "skin."

In what I have to suggest, the treatment, I think, may be considered under two heads—the first, when only a small loop of cord has prolapsed, and remains, let us say in the vagina; the second, when 10 or 15 inches have escaped, a considerable portion being external.

For treating the first of these I devised a very simple little instrument a good number of years since, of which the annexed figure will give an exact idea, but I have never had an opportunity



of using it. I gave one to Sir James Simpson some time before his demise, but I never heard from him whether he had found it to answer the purpose intended. A represents an indiarubber tube about the size used, which has been cut open. B is a guttapercha tube, also about the size used which has been slightly heated, split open at the top, and fastened by a stitch or two to the indiarubber tube. The guttapercha tube is 10 inches long, and into it a wire has been introduced to give it firmness in use. In using this I propose that the cord should be slipped into the indiarubber tube A, and that both should be pushed up by means of the guttapercha tube B into the uterus, and allowed to remain there, the wire in the guttapercha tube being withdrawn as soon as the head has descended sufficiently to remove further danger. Independently of the support given, in such a case, by the wire and guttapercha tube, I would expect that the mere bulk of the indiarubber tube alone would prevent the tube prolapsing, and I do not think that the two tubes, though allowed to remain in the parts, would interfere materially with the course of the labour.

In the second class of cases, where the loop of cord is considerably longer, this method might fail, from only a portion of it being supported and kept up. In these perhaps the following plan might be found to answer:—Take an indiarubber tube, say 8 inches long and 2 inches in circumference. Pass through this a piece of tape, and fasten it with a few stitches at both ends of the tube. In the case supposed, take the prolapsed cord and twist it gently round the tube as much as may be necessary. Then tie the two ends of the tape together, and return the whole into the uterus. In a case of this kind which occurred to me at a distance from home, many years since, I folded a piece of cotton cloth so as to represent the tube, attached a piece of tape as mentioned, tied, and returned this into the uterus. The child was born alive, but was in a weakly condition. The indiarubber tube, from its elasticity, ought to give the child a much better chance for its life, and indubitably in all these cases the forceps should be used at as early a period as possible. To prevent injury to the mother, the apparatus ought also to be made antiseptic.

With these and other means which are now placed at our disposal, it is to be hoped that this complication of labour, in which the older obstetricians lost more than two-thirds of the children, may become much less formidable in the future than it has proved in the past.

My son, who practises in Ashton-under-Lyne, and who has seen a good many cases of prolapsus, tells me that he has succeeded very well by combining the postural treatment with replacement and support. He uses for the latter purpose the gum elastic catheter and stylet, attached by a thin cord to the funis. I have no doubt that this will answer excellently well where the prolapsed cord is short, although the little apparatus of which I have given a drawing looks to me simpler and more easily applicable. Where, again, the prolapsed cord is long, I doubt very much whether either alone would suffice, where the patient is restless or unmanageable; and it may therefore be useful to have such a plan as I have proposed in reserve for such. The treatment of prolapsus by including the cord in a purse and returning it, as recommended by Dr Colin M'Kenzie, seems to have been suggested when the prolapsus was great; but here, again, my piece of indiarubber tube might be found the more simple and practical of the two.

The Forceps and Craniotomy versus Turning.

An account of the following case, in which I was lately called to assist a brother practitioner, Dr Hadden, may perhaps be worth perusal by the general practitioner in the country, as containing one or two lessons that may be of use in these responsible and trying cases, where he has to depend on his own judgment and energy for doing the best he can for both mother and child.

At 4 A.M. on 31st March I was sent for by Dr Hadden, and found that the patient had been in labour from 11 P.M. on the previous night, and that Dr Hadden had been with her from 1 A.M. He informed me that he had twice tried to deliver with the forceps, but had failed. The woman, I found, had previously had eight children, and the three last had been delivered by Dr Hadden with the forceps, but without any very great difficulty. At this time the woman was restless and violent, and occasionally slightly delirious, and expressed her determination that no more instruments should be used with her. After a time, however, I persuaded her to allow me to make an examination, when I found that the uterus was well dilated, with the head at the brim, the uterus being caught posteriorly and anteriorly—in the former situation from a very prominent promontory of the sacrum, and in the latter from the pubes projecting slightly inwards. After some pretty forcible manipulation, introducing my hand into the vagina, I succeeded in pushing the uterus over the head, but found afterwards that it had a constant tendency to come down again when the upward pressure was removed. Shortly afterwards I persuaded the patient to allow me to try what I could do with the forceps. I found an ear above the symphysis pubis, and I had no difficulty in fixing my No. 1 blade there, but the second blade would not take its place so easily, in consequence of the projecting promontory. I succeeded, however, in getting a hold—first, by introducing blade No. 1 posteriorly first, and by throwing it well backwards; or secondly, by using the short blade, No. 2 of my forceps, posteriorly; but the head made very little, if indeed any, advance. After a while I got the head turned a little, and got a splendid hold with both the long blades, exerting my whole strength in different directions, but still without making almost any alteration in the position of the head. This was continued without much intermission till 6 A.M., when the pains had gradually died away.

The patient then said, very properly, that we had better let her alone till the pains returned, and this was agreed to. At 8 A.M. we visited her again, and we found that the pains had returned, though in no great vigour, and the forceps were again tried, and again failed to deliver, although nothing could be more satisfactory than the hold I got. I made traction in the axis of the pelvis; I turned the head, and tried to throw it backwards; I used as much leverage as I could by moving the handles of the forceps from side to side, but never got the head fairly to enter the pelvis, although I exerted my whole strength in doing so.

Under these circumstances Dr Hadden and I had to consult what was to be done, and we agreed that there was presented only one of two alternatives—perforate or turn. Not anticipating any great difficulty in pushing the head up, we agreed to try the latter, and give the child this last chance for its life. Accordingly, putting the patient under chloroform almost by force, we both worked at this for some time, using pressure externally to help us, and at last succeeded in getting both feet down. There was very considerable difficulty in getting both arms down, but this also was accomplished. Now, however, commenced our greatest difficulty, the getting the head to enter the pelvis. With all the advantages which this mode of delivery is believed to give in such cases, we found it impossible to get the head through the pelvis. With all the traction power that we singly and jointly could apply, the head would not move, and the cervical vertebræ had become completely dislocated from the cranium. It became evident now that the head must be perforated to assist us, and I had to use the perforator with a skull so ossified that I had great difficulty in making any impression on it. Besides this, the dislocation of the vertebræ lost me the power of revolving the head or of knowing exactly where my perforations were being made. The first I made did not answer, for I found I could not from it reach the brain. Another, accordingly, was made higher up, and from it a little brainy substance was brought out on the perforator. At this opening I worked, and at last succeeded in getting my finger and the crochet deep into the brainy substance. Working on, I got a firm hold with the crochet, and delivered the head at near 11 A.M., after a few of the hardest hours' work either Dr Hadden or I has ever had.

The child was one of the largest I have ever delivered. I wished to get it weighed, but the father failed to do so. The first perforation I found was under the chin, and entered the mouth. The second was above the right orbit, and it was, of course, from it that the cerebral substance escaped. Shortly before the case was finished a long loop of the funis escaped, complicating the case still more; but of course this was of no consequence, as the child was already dead.

Very well satisfied, it may be supposed, we both were when delivery was effected, for not much more of the amount of traction that had already been exerted would certainly have left the head alone in utero.

The woman, of course, after all these operations, was much exhausted. She fevered for the first day, and had great tenderness over nearly the whole abdomen, but on 4th April was going on favourably.

In looking at this case, the causes of detention and difficulty are obvious enough, though we could hardly have anticipated that the child would be found to be so very large, for the woman herself was rather diminutive in size. This, however, conjoined with the slightly prominent pubes, and the very prominent promontory of the sacrum, made up the difficulty we had to encounter. Under any circumstances this, in such a case, would have been considerable; but it was greatly increased by the excited and unruly condition of the patient. In reviewing what was done, the only thing in conducting it which now seems to me questionable was the attempt to save the life of the child by turning; for, by doing so, I have no hesitation in saying that the difficulty of ultimately lessening the head was greatly increased, and the life of the mother correspondingly endangered. Perforation was thus rendered much more difficult than it would have been before turning; and, with all the care we could use, there was not a little risk of the integuments of the neck giving way, and the head alone being left in the uterus. Fortunately this was escaped; but I think this case, along with many others, teaches, that although turning has often been found advantageous, it also has occasionally its disadvantages—especially in relation to the recovery or the life of the mother.

ARTICLE VI.—*Quarterly Report of the Royal Maternity and Simpson Memorial Hospital.* By J. HALLIDAY CROOM, M.B., F.R.C.P.E., Physician to the Hospital; Lecturer on Midwifery and Diseases of Women, School of Medicine; Vice-President, Obstetrical Society, Edinburgh.

(*Read before the Edinburgh Obstetrical Society, 9th November* 1882.)

THIS report, for the quarter ending 31st October 1881, differs from those which I have previously presented to the Society to this extent, that I have confined it simply to statistics, without entering into any extended details of individual cases. Those cases which presented special features I hope to bring before the Society in another shape. The report, as usual, deals with intern and extern cases.

Intern Cases.—During the quarter 50 women were delivered of 48 viable children—24 males, 24 females. Primiparæ gave birth to 14 males, 12 females; multiparæ to 10 males, 12 females.

Average Age.—Multiparæ, 28·25; Primiparæ, 25·5.

Average Length of the Stages of Labour.

	1st Stage.	2nd Stage.	3rd Stage.
Multiparæ, .	8h. 56m.	1h. 32m.	14m.
Primiparæ, .	17h. 22m.	2h. 27m.	18m.

Average Length of whole Labours.—Multiparæ, 10 h. 17 m.; primiparæ, 22 h. 23 m.

Classification of Labours.—Natural, 35; laborious, 10; preternatural, 2; complex, 3. One street birth. Two abortions—one at 3rd and one 6th months.

Positions.—L.O.A., 31; R.O.P., 10; R.O.A., 0; L.O.P., 1; L.S.A., 2. In a case of labour with rickety pelvis, the head was transverse all through; occiput to the left. In 4 cases the position was not ascertained. In 1 R.O.P. the position was persistent.

Of the laborious cases 7 were instrumental. In 5, short forceps were used—in 2 cases for simple inertia in primiparæ; in 1 for spasmodic contraction of the os uteri internum in a primipara; in 1 for simple rigidity of cervix in a secundipara; in 1 of masculine pelvis.

Twin Cases.

Presentation.	No. of Preg.	Position.	Sex.	Delivery.	Result to Mother and Fœtus.
I. Vertex	1	L.O.A.	f.	normal	alive
Breech			f.	,,	,,
II. Vertex	3	R.O.P.	m.	sh. forceps	,,
Breech			f.	normal	,,
III. Breech	8	L.S.A.	f.	,,	,,
Vertex		R.O.P.	f.	,,	,,
IV. Breech	5	R.S.P.	m.	,,	,,
Footling			m.	,,	,,

In 2 cases cephalotripsy was performed—the first in the case of a syphilitic woman with a conjugata vera measuring under 2½ inches, and the second in a justo-minor pelvis with a conjugate barely admitting the tips of the three fingers. In both cases the recovery of the patient was uninterrupted.

There were 3 complex cases—2 cases of prolapsus funis, both in primiparæ, 1 vertex, 1 breech; 1 accidental hæmorrhage, membranes ruptured, and forceps applied. In both cases of prolapsus funis the cord had ceased to beat.

The perinæum was torn in 8 cases—7 primiparæ, 1 multipara; in 3 cases torn to verge of anus, in 3 to half its extent; in 1 case oblique tear, in 1 slight laceration.

Management.—First 3 sewn with silkworm gut. The others were only kept clean.

Result.—Of the first 3, one did not heal. The patient syphilitic. The oblique tear did not heal. In the others union was complete.

In 3 cases retention of urine was present for three days—viz., in 2 where the tear was to the verge of anus, in 1 where the tear was oblique.

Puerperium.—With the single exception of a case of parametritis, which ended in abscess on the forty-fourth day, there was no complication during the puerperium.

Mortality of Intern Cases.—Maternal, 2—1 pleurisy with effusion. Patient was admitted in this condition, and died a few hours after delivery. 1 acute peritonitis. *Infantile deaths,* 2—1 overlain; 1 premature at seventh month: died ten days after labour from convulsions. *Fœtal deaths:* 2 embryulcia; 1 prolapse of cord in a primipara; 1 prolapse of cord in a multipara; 1 hæmorrhage three weeks before delivery.

Extern Cases.—159 women were delivered—multiparæ, 130 primiparæ, 29. Average age of multiparæ, 28·5; average age of primiparæ, 21·9.

Classification of Labours.

		Multiparæ.	Primiparæ.
Natural,	143	117	26
Preternatural,	5	4	1
Complex,	6	5	1
Abortions,	5	4	1

Analysis.—Multiparæ: 4 twins (no fœtal deaths); 1 placenta prævia (fœtus dead); 1 accidental hæmorrhage (fœtus alive); 1 post-partum hæmorrhage (fœtus alive); 1 prolapse of funis (dead). Primiparæ: 1 breech (fœtus alive); 1 post-partum hæmorrhage (fœtus alive).

Mortality in Extern Cases.—Maternal mortality *nil.* Infant mortality:—*Multiparæ* gave birth to 133 children, among which the mortality was 14. *Primiparæ* gave birth to 30 children, among which the mortality was 1. *Cause of Death.*—1 prolapse of cord; 1 central placenta prævia; 1 seventh month, from injury, putrid; 1 anencephalous, with spina bifida and meningocele; 1 premature birth; 3 putrid, near term; 5 cause unknown.

ARTICLE VII.—*Statistics of Operations in Mr Bell's Wards, Royal Infirmary, Edinburgh, during the Winter* 1881-82.

FROM the beginning of November to the end of April, 145 operations have been performed in these wards, with a total of 4 deaths. The results are as follows:—

	No.	Recovered.	Died.
Amputations.			
Thigh	5	5	0
Leg	3	3	0
Foot (Syme)	6	6	0
Arm	2	2	0
Hand (partial)	2	2	0
Fingers	10	10	0
Toes	2	2	0
Total	30	30	0
Excisions.			
Elbow	2	2	0
Both Phalanges of Great Toe	1	1	0
Total	3	3	0
Tumours.			
Epulis	1	1	0
Vascular Tumour of Finger	1	1	0
Carry forward,	2	2	0

Tumours—continued.	No.	Recovered.	Died.
Brought forward,	2	2	0
Epithelioma of Lower Lip	9	9	0
„ Upper Lip	2	2	0
„ Tongue	1	1	0
Paraffin Epithelioma	1	1	0
Cystic Sarcoma (Breast)	1	1	0
„ (Buttock)	1	1	0
„ (Testicle)	1	1	0
Scirrhus of Mamma	8	8	0
Fibrous Tumour of Mamma	2	2	0
Recurrent Sarcoma of Leg	1	1	0
„ Male Breast	1	1	0
Papillomata (of Foot)	1	1	0
„ (of Rectum)	2	2	0
Nævi	2	2	0
Parotid Tumour	2	2	0
Nasal Polypi	6	6	0
Tumour of Upper Jaw	1	1	0
Simple Cyst of Neck	1	1	0
Congenital Cyst of Eyebrow	2	2	0
Sebaceous Cysts of Head	3	3	0
Total	50	50	0
Operations on Bones.			
Necrosis	10	10	0
Cario-necrosis	4	4	0
Fragments of Skull removed	2	1	1
Total	16	15	1
Operations on Muscles and Tendons.			
Tenotomy	5	5	0
Compound Ganglion of Wrist opened	1	1	0
Total	6	6	0
On Joints.			
Loose Cartilage removed from Knee	1	1	0
Ankle-Joint incised	1	1	0
Total	2	2	0
Operations on Mouth and Pharynx.			
Hare-Lip	4	3	1
Uvula removed	1	1	0
Tongue tied (divided)	1	1	0
Cleft Palate	1	1	0
Total	7	6	1
Operations on Nose.			
Nostrils reopened after Lupus	1	1	0
Stricture of Lachrymal Duct dilated	1	1	0
Total	2	2	0

On the Genito-urinary Organs.

	No.	Recovered.	Died.
Blood Cyst of Labium opened	1	1	0
Hydrocele tapped and injected	3	3	0
Paraphymosis reduced	2	2	0
Circumcision	3	3	0
Strumous Testicle removed	1	1	0
Lithotomy	1	1	0
Stone removed from Female Bladder	1	1	0
Total	12	12	0

On the Rectum.

	No.	Recovered.	Died.
Internal Piles	2	2	0
External Piles cut off	1	1	0
Fistula in Ano	5	5	0
Fissure of Anus	1	1	0
Total	9	9	0

Other Operations.

	No.	Recovered.	Died.
Ingrowing Toe-nail	3	3	0
Tracheotomy	1	0	1
Needle removed from Hand	1	1	0
" from Breast	1	1	0
(Several needles were removed from this patient.)			
Web-Finger divided	1	1	0
Strangulated Hernia	1	0	1
Total	8	6	2

Summary.

	No.	Recovered.	Died.
Amputations	30	30	0
Excisions	3	3	0
Tumours	50	50	0
On Bones	16	15	1
" Muscles and Tendons	6	6	0
" Joints	2	2	0
Mouth and Pharynx	7	6	1
Nose	2	2	0
Genito-urinary Organs	12	12	0
Rectum	9	9	0
Various	8	6	2
Total	145	141	4

With reference to the 4 cases which ended fatally, the first was a man who came into this hospital with a compound comminuted fracture of the skull of eight weeks' standing. Serious symptoms came on a few days after admission, and several pieces of broken bone were removed, which gave temporary relief, but the patient died in a few days from suppurative meningitis and sloughing of the brain substance.

The second was a case of hare-lip in a child, who died a few days after the operation, from convulsions probably connected with teething. The wound had healed. The third was a very bad case of diphtheria, where tracheotomy was performed; but the disease spread into the bronchial tubes and proved fatal. The fourth was a man with strangulated inguinal hernia. When operated upon, immediately on admission, his bowel was found to be in a condition closely approaching gangrene, and having the peritoneal covering stripped off a considerable part of it. He died the next morning.

This additional note refers to all the cases of compound fracture treated in Mr Bell's wards during the past winter.

Compound Comminuted Fracture of Femur.

George Anderson, aged 66, was admitted on 20th December 1881, suffering from a compound comminuted fracture of the left femur, caused by a fall whilst cleaning windows. There was a wound on the outer side of the thigh which communicated with the fracture, which was comminuted and situated about the middle of the shaft of the femur. The wound was syringed out with a solution of carbolic acid (1 to 20) and a drainage-tube introduced; an antiseptic dressing was then applied, and the leg put up in extension with the weight and pulley and a sand-bag applied to each side. His temperature never rose after the accident; but there was bagging of pus in several places, which required incisions to be made for its evacuation. The discharge, though purulent and copious, was never putrid. He is still in hospital, and the wound is dressed every three or four days.

This case was complicated by concussion of the brain, with fracture of the base of the skull, which passed from the glenoid fossa through the external auditory meatus; there was also fracture of the inferior maxilla. These injuries were caused by his chin striking violently upon something in his fall.

Compound Fractures of Tibia and Fibula.

1. Jane Macdonald, aged 54, admitted on 26th January 1882, suffering from compound fracture of both bones of the right leg, caused by being run over by a cab. The wound was on the inner side of the leg, and the fracture of the tibia, which was oblique, was situated about 3 inches above the internal malleolus. The wound was syringed out with carbolic acid solution (1 to 20) and a drainage-tube introduced. It was then dressed antiseptically and put up in a Macintyre splint, which was then slung in a Salter's cradle. There was never any rise of temperature, and the discharge, which was very small in amount, was serous in character. After the first two days the leg was only dressed once a week, and on 15th April the dressing was discontinued, the wound being healed and the fracture firmly united. There was no deformity except a slight projection of the point of the lower fragment. On 17th April the leg was put up in a starch bandage, with a window opposite the projecting point of bone, and the patient went out a day or two after.

2. Thomas Cullen, aged 25, was admitted on 18th April 1882, suffering from a compound fracture of the left tibia and fibula, caused by a blow from a crane. The wound was syringed out with 1 to 20 carbolic solution and dressed antiseptically. The leg was then put up in a box splint. The temperature remained normal, and the discharge never became purulent. The patient is quite well, the wound being now healed.

3. George Smith, aged 18, admitted on 7th March 1882, with a compound fracture of the tibia and fibula, caused by a plate of metal falling upon the leg. The wound, which was on the inner side, also opened the ankle-joint. It was purified by injection of carbolic solution (1 to 20), dressed antiseptically, and put up in a box splint. Temperature remained normal. Discharge never purulent. Dressed once a week after the first few days.

April 28th.—At Convalescent Hospital, quite well.

Fracture of Tibia and Fibula, with the Formation of Bullæ, which subsequently became Compound.

John Kirk, aged 15, admitted on 7th January with fracture of both bones of the leg, with comminution (caused by a truck running over his leg in a mine). The leg was much swollen, and numerous bullæ were present over the seat of fracture. It was at first merely laid upon a soft pillow and warm flannels applied. Sloughing took place (over the seat of fracture) all round the limb, beginning about 2 inches above the malleoli, and extending upwards for about 5 inches. These sloughs exposed the tibia and also the fibula, both of which were seen denuded of periosteum. The leg was then poulticed and put upon a Macintyre splint, and when the sloughs had separated the wound was treated with zinc ointment, and later on with red lotion. He is still in hospital, and the wound is filling up with granulations. A small layer of the tibia will have to separate.

Compound Fracture of the Fibula from Railway Injury, with Destruction to the other Foot.

Lachlan Macleod, aged 26, was admitted on 28th February 1882, suffering from severe injuries to both lower extremities, the result of a railway accident. The patient, who was a goods guard, was engaged in uncoupling waggons, when he slipped and fell across the line. Two wheels were seen to pass over both his legs. On admission about three hours after the accident, the right foot was found to be quite destroyed, most of the tarsal bones being fractured and the tissues being reduced to a pulp; there was also a wound opening the ankle-joint. The heel was destroyed, so amputation was performed through the lower third of the leg, and an antiseptic dressing applied. The left leg, over which both wheels were stated also to have passed, presented merely a transverse fracture of the fibula, without displacement, which communicated with the air by a small opening about three inches above the external malleolus. This was rendered aseptic by syringing with 1 to 20 carbolic solution, and a gauze dressing put on. The leg was then put in a box splint, which was slung.

Both legs did well. The temperature never rose more than two degrees above normal. Several small abscesses formed in the right leg and were opened. He never had any pain or discomfort in the left leg, which was dressed, after the first few days, only once a week, the discharge being very small in quantity and only serous.

Patient was discharged in April with the stump of his right leg soundly healed, and the fracture of the left fibula firmly united. The left leg will be perfectly useful, and there is no deformity.

Compound Fracture of Radius and Ulna.

John Hepburn, aged 60, was admitted on 29th December 1881, suffering from compound fracture of both bones of the forearm, about the middle of their shafts, with comminution, caused by gas explosion. The wound was rendered antiseptic and an antiseptic dressing applied, with an anterior and posterior splint. It required frequent dressing, as numerous abscesses formed which required to be opened, and several pieces of dead bone were removed. He was discharged on 3rd March, the wounds being nearly healed, and the arm, though rather stiff, retaining a considerable amount of power of pronation and supination.

Compound Fracture of Os Calcis.

1. Alex. Crichton, aged 53, admitted 27th December 1881, suffering from compound fracture of the right os calcis, caused by a fall whilst cleaning windows. The bone was completely pulverized. There was severe bleeding on admission, and several vessels were tied. The bleeding recurred in two or three hours, and the wound was then stuffed with carbolic acid lint, with an antiseptic dressing. The wound became putrid, and was then dressed with wet boracic lint and marine lint. Numerous pieces of bone came away, and the wound is now nearly healed.

2. John Murray, aged 56, admitted 20th March 1882, suffering from a compound fracture of the left os calcis, caused by a fall from the roof of a coachhouse on to his heel. The wound, which was very small, was enlarged, and a large quantity of extravasated blood evacuated, after which it was syringed out with carbolic lotion (1 to 20) and a drainage-tube introduced. It was then dressed antiseptically. The temperature remained normal throughout, and he was dismissed cured on 14th April.

Part Second.

REVIEWS.

The Science and Practice of Medicine. By WILLIAM AITKEN, M.D., etc. 2 Vols. Seventh Edition. London: Charles Griffin & Co.: 1880.

A Treatise on the Principles and Practice of Medicine. By AUSTIN FLINT, M.D. Fifth Edition. Philadelphia: Henry C. Lea, Son, & Co.: 1881.

The Theory and Practice of Medicine. By JOHN SYER BRISTOWE, M.D., etc. Third Edition. London: Smith, Elder, & Co.: 1880.

A Text-Book of Practical Medicine. By Dr FELIX VON NIEMEYER. Translated from the Eighth German Edition. 2 Vols. London: H. K. Lewis: 1880.

Supplement to Ziemssen's Cyclopædia of the Practice of Medicine.
General Index to Ziemssen's Cyclopædia of the Practice of Medicine.
London: Sampson Low, Marston, Searle, & Rivington: 1881.

IT is Carlyle, we believe, who tells an inquirer to read as many text-books as he can, so that he may drive his furrow broad and deep through that science which he seeks to make his own. No one, perhaps, was better fitted to advise, and we are sure that no better advice could be given, though it agrees but little with the educational tendencies of the present age, which, on the principle of "nothing like leather," ignores text-books, elevates every subject in its entirety to the dignity of a fundamental science, and makes the knowledge of a teacher's *ipsissima verba* the sole test of a man's grasp of a science the foundations of which are as deep as Hippocrates and as wide as life itself. This promotion of *note-book* vice *text-book* cashiered, is only possible where an essentially rotten system prevails. And yet this abolition of the text-book is said to obtain in one, at least, of those schools of medicine historically most famous. But any school where such a system rules can only, like a soap-bubble, attract by a radiance derived from some far-distant source of light, and, being full of emptiness within, must ere long collapse.

The text-books at the head of our list are all old, tried, and well-known friends, quite independent of any praise or blame from us, and yet owing somewhat of their independence to our former kindly notice. They have all a well-known family likeness, yet they differ in their several qualities, just as one child differs from another. One is more observant, another more reflective, and a third more original, and these very qualities make them individually more suitable to minds of diverse tendencies, while they make them collectively more useful to those who seek to grasp the whole subject. For more than twenty years Aitken's work has been before the profession, and from a somewhat meagre and unsatisfactory volume it has grown to the two portly tomes we now have. There is probably no text-book in the English or in any other language which is so complete and comprehensive as this is. Indeed, its comprehensiveness constitutes at once its value and its defect. There is much in it that we find difficulty in finding elsewhere, yet all so inartistically jumbled together that it is not very pleasant reading; while, intended as it is for a student, it is very confusing for him to have diametrically opposite treatments set down as of equal value, and in pneumonia, for instance, to find the changes rung from blood-letting to spraying out with carbolate of soda. There is this advantage, however, that, be the teacher what he pleases, old school or new school, his therapeutical system finds its representative here, and the rest may be at his bidding expunged.

This edition has been remodelled and much of it re-written. The affections of the nervous system are more fully entered into, and altogether it is even more worthy than its predecessors of the attention of the student and junior practitioner.

Flint's treatise has already reached its fifth edition. It is the work of an accomplished hospital physician, and is remarkable for its masterly descriptions of disease. Claiming to be only a text-book, it is more: it is a work on clinical medicine embodying the experience of a lifetime. It has been carefully brought up to the present day, even pneumonia, or pneumonitis, as he loves to call it, having the synonym of pneumonic fever appended, and is partly treated of from this point of view. An entire new section on diseases of the hæmatopoietic system has been added, and the additions and alterations have been so great that it is virtually a new work, and not merely a new edition. In making these alterations Flint openly confesses that he has not been too careful to maintain a character for consistency, but has endeavoured to give his reader his more matured, and, as he believes, more truthful views, careless of any discrepancy between them and those he formerly advanced. Flint is right, and only in this way could he produce a work worthy of being looked upon as a standard. Our works should be pedometers, and not milestones: we must carry the record of our progress with us, and not leave it behind.

Bristowe's work has reached its third edition, and well deserves the success it has attained. The author has been long before the profession as an able thinker and writer, and the present work is not derogatory to the reputation he has already obtained. The present edition has a short article on hæmophilia, one upon tetany, and a long and important article on insanity, added to the contents of the former editions, besides some fifty new woodcuts, which, if somewhat diagrammatic in character, have at least the advantage of being clear and instructive. This work is eminently concise and readable. It is not a mere accumulation of facts, but a carefully elaborated statement of the author's views after due consideration of all the facts known.

The present edition of Niemeyer's well-known work is partly a translation from the seventh German edition, partly an adoption of some of the additions incorporated in the eighth (or posthumous) German edition, and it also includes additions from other sources not specified, calculated, as the translators hope, to make it more acceptable to the American reader. But all these alterations, adding here and condensing there, interfere, as we may well suppose, very much with the graphic description and charming style peculiar to the original. Niemeyer died in 1871. As we may therefore readily conceive, his own work is no longer abreast of the present state of our knowledge; yet this composite work is well up to the present day, though it neither speaks so authoritatively nor is it written in so concise yet pleasing a manner as the original, which was the most popular and best of all German text-books on practice of medicine.

The supplementary volume to Ziemssen's *Cyclopædia* is not a translation from the German, but is entirely the work of American physicians. It brings up that great and wellnigh indispensable work to the present day, giving not only the bibliography, but also an abstract of the principal papers on a number of important diseases, the mere index of which occupies twenty pages. In the present day, if we wish to be useful and to increase the sum of knowledge, it is absolutely necessary that information upon that particular subject be full and accurate, otherwise we may indeed appear learned to the unlearned, but are really only building a cairn to commemorate our own ignorance. This volume is a necessary supplement for all those who already possess Ziemssen's wonderful work, the most complete cyclopædia in any language. The index volume is also indispensable: it is very complete and well done, and saves a deal of trouble in looking up any particular subject.

Lectures on Surgery. By JAMES SPENCE, F.R.S.E., Surgeon to the Queen in Scotland; Professor of Surgery in the University of Edinburgh; Member of General Medical Council; formerly President of the Royal College of Surgeons, Edinburgh; Surgeon to the Royal Infirmary and Lock Hospital, etc., etc. Third Edition. Vol. I. Adam & Charles Black, Edinburgh.

WE have received as yet only the first volume of the third edition of this admirable work, which is now fairly taking its place as a surgical classic. Its great value lies in the absolute certainty we have in consulting it that we are not reading merely a compilation from other works, but, on the contrary, are obtaining the well-considered and carefully stated individual opinion of a very able and experienced surgeon, whose extraordinary conscientiousness and elaborate painstaking ensures that not a word is set down at random. While for his students it has the completeness of a systematic course, most of us seniors will turn to certain favourite regions in surgical practice where the master hand is most distinctly visible, and in which Mr Spence is perhaps the greatest living authority. Such chapters as those on Mortification and where and when to Amputate; Gunshot Wounds in Civil Practice, and their Treatment; Injuries and Diseases of Bloodvessels; Injuries of the Head; Hernia; Tracheotomy; and Lithotomy,—are absolutely priceless, and their dogmatic tone we feel to be natural and becoming.

The burning questions of pathology, essentials of the inflammatory process, antisepticism, theories of syphilis, etc., are treated from the outside, or, indeed, almost from above, with the calm indifference—too calm to be felt as ignorance—of one who is above and beyond the pathologies of the young and new school.

Sir Thomas Browne's Religio Medici, Letter to a Friend, etc., and Christian Morals. Edited by W. A. GREENHILL, M.D. Oxon. London: Macmillan & Co.: 1881.

THIS is a very elegant edition of a book which must possess great inherent merits, when we learn that it has passed through twenty-five editions in our own language, ten in Latin, one in French, two in German, and one in Italian. Many editors have taken pains in presenting it to successive generations of readers with as much judgment and intelligence as they were capable of; but Dr Greenhill has outstripped them all, showing his high estimate of the author's various works by expending a great amount of scholarship and care, almost fastidious, in determining the original text, explaining it by valuable notes, and furnishing also an index, both *general* and *glossarial*, which seems to be thoroughly reliable and satisfactory. We may mention, as an additional ground for expecting much from the book, that there is a *Life of Sir Thomas Browne* by Samuel Johnson, which is amusingly characteristic of that great man, and indicates that he deemed him worthy of a place in the list of eminent persons, such as Boerhave, Sydenham, and others, whose biographies he had written.

It may interest our readers in Sir Thomas Browne to know something of his personal history. Born in London, 19th October 1605, three years before John Milton and two years after Sir Kenelm Digby, he entered Winchester School in 1616, the year which saw the death of Shakespeare and Cervantes. He matriculated at Broadgate Hall (afterwards Pembroke College), Oxford, in

1623, the year in which Pascal opened his eyes upon this world. He became a B.A. in 1626, when Francis Bacon died and Robert Boyle was born. He took the degree of M.A. in 1629, and M.D. at Leyden in 1633. He is supposed to have written the *Religio Medici* in 1635; but the first *authorized edition* did not appear until eight years later—in 1643. He settled at Norwich in 1636, and took the degree of M.D. at Oxford in 1637. He married Dorothy Mileham in 1641, an event in curious contrast with some of his views expressed at pp. 110, 111 of his book. They had ten children, of whom a son and three daughters survived their parents. In 1664 he was elected an Honorary Fellow of the Royal College of Physicians, receiving his diploma in the following June—the year of the Great Plague in London. He was knighted by Charles II. in 1671; and on 19th October 1682 died at Norwich, in his 76th year, after a short illness. His sufferings were very great; but some of his last words were expressions of submission to the will of God and fearlessness of death.

The impression conveyed both by his history and his writings is that, although a man of scholastic, scientific, and literary habits, he nevertheless worked assiduously and profitably as a physician, and served his day and generation in a very creditable manner. He was undoubtedly a good man, with a certain amount of self-complacency and superstition mixed with eccentricity. His books, now republished and edited so heartily by Dr Greenhill, will amply repay a perusal. Their tendency is unmistakably good, and they contain much that is suggestive, while they sparkle all over with a splendid, although sometimes a redundant, ideality. How some of his cotemporaries regarded him as a deist, or even an atheist, it is difficult to understand. Samuel Johnson, who seems really to have admired him, endeavours to explain these erroneous estimates of the man, and sums up an elaborate argument in his defence with these powerful sentences. We make no apology for quoting them:—

"Whether Browne has been numbered among the contemners of religion by the fury of its friends or the artifices of its enemies, it is no difficult task to replace him among the most zealous professors of Christianity. He may, perhaps, in the ardour of his imagination, have hazarded an expression which a mind intent upon faults may interpret into heresy if considered apart from the rest of his discourse; but a phrase is not to be opposed to volumes. There is scarcely a writer to be found, whose profession was not divinity, that has so frequently testified his belief of the sacred writings, has appealed to them with such unlimited submission, or mentioned them with such unvaried reverence. . . . The opinions of every man must be learned from himself: concerning his practice it is safest to trust the evidence of others. Where these testimonies concur, no higher degree of historical certainty can be obtained; and they apparently concur to prove that Browne was a zealous adherent to the cause of Christ; that he lived in obedience to His laws, and died in confidence of His mercy."

The Science and Art of Midwifery. By WILLIAM THOMSON LUSK, A.M., M.D., Professor of Obstetrics and the Diseases of Women and Children in the Bellevue Hospital Medical College, etc. With numerous illustrations. London: H. K. Lewis, 136 Gower Street: 1882. Pp. xviii., 687.

SOME months ago we had occasion to notice a text-book of modern midwifery which the author, Dr Glissan, recommended to the American profession as likely to be a more useful manual than were the reprints of English and German works which, he stated, were at present in use in the American schools, and we then found ourselves compelled to state that the work did not possess either sufficient merit or completeness to warrant the fulfilment of the author's expectations. Nor was it allowed long to occupy the position claimed for it by its writer of being the only modern American text-book, as Professor Lusk's treatise issued from the press just a few weeks later. To compare the two books would be impossible. Save the subject, they have nothing in common. The one is the dull prosing of a man who has evidently had considerable practice, and who seems to know his work, perhaps a little better than his neighbours, while in the other we recognise the finished product of a writer in whose mind the scientific and the practical are judiciously combined, and who is thoroughly cognizant of all that has been done and written by other workers in the field, and is, at the same time, eminently capable of sifting the wheat from the chaff. Indeed, if we would in a word indicate our opinion of Professor Lusk's book, we would transfer the title arrogated by Glissan, and call it essentially a text-book of *modern midwifery*, for in it we find references to the current literature of all countries up to the very date of publication, prominence being given to the labours of German investigators, which, the author states in his preface, "has not been due to a lack of appreciation of valuable contributions from other foreign and home sources, but because, with large hospitals, and with state encouragement, the obstetrical writers of Germany have of late years occupied a vantage-ground of which, to their credit, they have been prompt to avail themselves." At the risk, however, of being blamed for forming a judgment from a somewhat local standpoint, we would refer to two omissions which we notice, the one on a theoretical point, the other on a practical. While the introductory part of the work, dealing with anatomical and physiological matters, is particularly clear and concise, we hardly think that even the brevity which has been evidently aimed at would pardon the complete absence of any reference to the researches of Dr Foulis on the structure of the ovaries and the development of the ova, which are to be found in the *Transactions of the Royal Society of Edinburgh*. The practical point we refer to is one of some importance. In speaking of heart-disease as complicating delivery, he says, p. 257, "Chloroform should be administered with special caution, if at all, during parturition;" and again, p. 219, "As in ordinary surgical practice, anæsthetics are contraindicated by organic affections of the heart and lungs." That this is true of ordinary surgical practice we in Edinburgh here would be inclined to deny, and to believe that, provided a person suffering from organic heart disease must of necessity undergo an operation, the chances of his dying on the operating table will be reduced by the use of chloroform owing to its effect in abolishing or reducing the element of shock, both mental and physical. In this way chloroform has undoubtedly saved many more lives than it has cost, though, unfortunately, those who have succumbed under its use may not have been the ones who would have suffered had they done without it.

When we come to the question of the use of chloroform, in obstetric practice, for patients affected with heart disease, an even clearer case is made out in its favour, and one diametrically opposed to Dr Lusk's teaching. In aortic incompetence, for instance, the greatest amount of danger during the labour is at the bearing-down period, when the expulsive muscles are being called into play, and when, as a consequence, the arterial tension is highly and suddenly increased. The use of chloroform at this time, by diminishing or entirely preventing bearing-down efforts, is of the utmost service, and has proved so even when given to patients who were already insensible as a result of the heart lesion. In marked contrast with what Dr Lusk would have us practise is the following conclusion of Dr Angus Macdonald's, arrived at on theoretical and clinical grounds and which will be found at the end of his work on *The Bearings of Chronic Disease of the Heart upon Pregnancy, Parturition, and Childbed*—a work to which Dr Lusk does not refer, and which we would venture to commend to his careful consideration:—"In almost all the cases I have met with" (*i.e.*, cases of labour in women affected with heart disease) "chloroform has been given, and apparently with benefit, during delivery. If carefully administered, I think it cannot but be useful in all cases."

Dr Lusk seems to have been too much influenced by German writers on this subject, whom he here, as all through the work, largely refers to, but whose fears of chloroform, as evidenced by the imperfect and timid way in which they usually administer it, he has not made sufficient allowance for.

The whole subject of cardiac diseases in connexion with pregnancy is dealt with in a page and a half, and the author does not here, as he does on other subjects throughout the book, succeed in leaving any definite ideas in the minds of his readers which would give them confidence in undertaking for the first time charge of such complicated cases. A young practitioner in difficulties as to what should be his line of treatment—whether he should allow the pregnancy to run its course, or should do what at first sight seems a natural way out of the difficulty, induce abortion or premature labour—would be disappointed and probably misled were he to refer to Dr Lusk's conclusions. At page 257 we find, "Such operations may be justified by the occurrence of symptoms menacing the mother's life." Compare this with Angus Macdonald, who, in the main, agrees with the German writers on this subject:—"Premature labour should seldom or never be recommended, because it is so much more likely to do greater harm, by disturbing the action of the heart and the condition of the lungs, than any good it might produce by terminating the evil effects of the pregnancy. It is always to be remembered that the relief of symptoms is not certain after delivery, or, indeed, anything like certain. The only conditions which seem to warrant the induction of premature labour are the presence of influences which unduly distend the abdomen, and thus keep the diaphragm in a state of continuous elevation." Another point which we would not appreciate from Dr Lusk's remarks, and one most important as regards prognosis, is the marked tendency of mitral lesions to prove fatal during the lying-in period, when on superficial examination one might consider himself warranted in expecting recovery.

Perhaps we have taken up too much time in alluding to these omissions, when we consider that they only refer to a page or two of the whole work, and could be remedied by the addition of another page or two; but perhaps our remarks may serve a better purpose than would the pointing out of such clerical and grammatical errors or slight mistakes in description as have crept into even this most carefully written work, and which are sure to find correction in the next edition—soon though that will assuredly be.

To consider the work in detail would merely involve us in a reiteration of the high opinion we have already expressed of it. What Spiegelberg has done for Germany, Lusk, imitating but not copying him, has done for English readers, and we feel sure that in this country, as in America, the work will meet with very extensive approval. If for the chapter on puerperal fever alone, it should be in the hands of every practitioner of midwifery. Dr Lusk has treated this subject in a manner eminently scientific and essentially practical, and has enriched its literature with new and valuable statistics.

In conclusion, we would congratulate Dr Lusk on having accomplished the not very easy task of acting fully up to his intentions as stated in his preface, thus:—

"In the preparation of this work, my purpose has been to present to the reader a fair statement of the changes which have been made by modern investigation in the views entertained respecting the physiology and pathology of pregnancy, labour, and childbed; and I have endeavoured to show that with advancing knowledge the art of midwifery has ceased to rest upon empirical rules, and is already, with rare exceptions, the natural outcome of scientific principles. To insure accuracy I have spared no pains to subject the doctrines taught to vigorous clinical tests; and I have everywhere sought to supplement and correct my own personal experiences by the recorded observations of others."

We cannot close without according a word of praise to the publishers for the highly satisfactory manner in which the book is got up, and the excellent rendering of the woodcuts.

A Treatise on Aural Surgery. By H. Macnaughton Jones, M.D., M.Ch., F.R.C.S. I. and Edin., Professor of Obstetrics and Gynækology in the Queen's College, Cork; Surgeon, Cork Ophthalmic and Aural Hospital; Surgeon, Cork County Hospital; Physician, Cork Fever Hospital; Consulting Surgeon, County and City of Cork Hospital for Women and Children and the Cork Maternity. Second Edition, Revised and Enlarged. London: J. & A. Churchill, New Burlington Street. Dublin: Fannin & Co., 41 Grafton Street. 1881. 8vo. Pp. 344.

In this the second edition of Dr Macnaughton Jones's treatise on aural surgery, we have the most comprehensive work on otology amongst the many recently published in this country. We would refer the reader to the graphic and able review of the first edition, by a distinguished author, in the November 1878 number of this Journal, at pages 454, 455, requesting at the same time his attention to the review of Dr Jones's *Atlas of the Diseases of the Membrana Tympani.*

The second edition, much enlarged and improved, if not almost entirely rewritten, forms a text-book well suited for the student as well as the general practitioner, devoting no less than 67 pages to explaining, describing, and illustrating the methods, processes, and instruments necessary for the examination of the ear. As was done in the former review, we would again respectfully draw attention to the chapter on the use of the tuning-fork in the diagnosis of the diseases of the ear, although Dr Roosa's observations and remarks, as laid before the American Otological Society, 1881, and since published, are more thorough and definite. The description of instruments and the way to use them, as well as their value in the hands of different aural surgeons, carries us over the next 46 pages, so that we might well say that 113 pages are devoted to the examination and methods of treatment of the ear. In chapter xiii. we have the most complete summary in any work of adenoid tumours. Dr Jones made a translation for the *Medical Press and Circular*, April to June 1879, of Dr Löwenberg's valuable *brochure* on *Adenoid Tumours of the Naso-Pharynx, their Influence on Hearing, Respiration, and Phonation.*

In chapter xvii. our author, through the kindness of Weber-Liel, gives us what is known up to date of tenotomy of the tensor tympani tendon. In chapter xviii. there are very full references made to some of the special causes of aural disease and deafness, such as *bathing, malaria, syphilis* (acquired and inherited), and to Menière's disease. There are also some well-written pages on the effects of galvanism and electricity in paralytic deafness, the progressive ear deafness of Weber-Liel, paying special attention to Dr Woakes's very able paper read at the Cambridge meeting of the British Medical Association.

Chapter xx. furnishes us with a distinct *résumé* of the more recent papers on micro-organisms and miasm in aural diseases, more especially of the former in the etiology of furuncules.

On the whole, the volume is a meritorious production, and, although it is not faultless, it reflects great credit upon its able author. We wish it every success, and we therefore recommend it to our professional brethren who are engaged in general practice, and to students, as a book to be consulted and studied by them with confidence.

Ringworm: its Diagnosis and Treatment. By ALDER SMITH, M.B. Lond., F.R.C.S., Resident Medical Officer, Christ's Hospital, London. Second Edition. London: H. K. Lewis: 1882.

WHEN a book doubles its size in its second edition, one has a right to ask whether the increase is an advantage or the reverse. And in the case of the volume before us it may be fairly said that Dr Alder Smith has made many additions of value. Dr Smith has exceptional opportunities of studying this disease, because boys, at an age when ringworm is common, probably most common, are for years under his immediate and daily observation. Of the frequency with which it is met with no better proof can be afforded than that of all the boys from eight to ten years of age brought up for examination for admission during the last seven years, 8·3 per cent. had ringworm, and this though strict instructions are issued that children who have ringworm will not be admitted into Christ's Hospital. We could have wished that Dr Smith had noticed one question, Can a child have ringworm twice? There is a popular idea that one attack, if entirely recovered from, is protective; but it is evident that many fallacies lurk round this opinion, and we can imagine no one more favourably situated for solving the riddle than Dr Smith. Perhaps in a future edition, which will certainly be required, this, among other points, such as the influence of season or special states of the atmosphere, to which Unna of Hamburg has called attention, will have notice paid by the author.

In discussing the diagnosis of tinea circinata or ringworm of the body, its differentiation from seborrhœa or pityriasis and from psoriasis is pointed out, but no notice whatever is taken of the circinate forms of lichen which in many respects simulate it so closely. There is the same well-defined papular margin, the same tendency to increase circumferentially and to fade in the centre, the same itchiness, more marked, perhaps, and the same predilection for children or young adults. True, there are no fungus elements discoverable; but these are occasionally found with difficulty in true ringworm of the body, especially in eczema marginatum. Dr Smith naturally devotes most space to ringworm of the head, and lays down with much precision, and the use of many sentences in italics, rules for the examination both of the head and hair, and the treatment of recent and of chronic ringworm. We may venture, perhaps, to suggest that too many remedies are named. It is certainly well to have a shot in the locker, but a multiplicity of remedies is confusing; and here, at least, we believe there might be some pruning done with advantage. It must at the same time be conceded that it is well to have an expression of opinion from one so well qualified to give it as to the value, and comparative value especially, of various combinations, and this is given freely. Dr Smith says a double cap must *always* be worn during the night-time, linen underneath and oilskin above. Over and above this he recommends a large handkerchief to be folded turban-wise. This would, it appears to us, keep the child's head uncomfortably hot. One thick flannel cap often washed would answer all purposes. For recent ringworm an ointment composed of pure carbolic acid, citrine ointment, and sulphur ointment, in proportions varying as the age of the child, is strongly recommended. Another good remedy is Bombay Goa powder—*chrysarobin*—rubbed into the spots night and morning, the places being first thoroughly bathed with warm water. This, however, is scarcely penetrating enough, and thus a preventive ointment, composed of ammoniated mercury gr. x., hyd. oxid. rub. gr. v., ol. amygdol. essent. ♏ij., and adip. benzoat. ℥j., should be applied to other parts of the scalp. For chronic ringworm Dr Smith depends most on oleate of mercury, reserving the artificial production of kerion by means of croton oil, with which his name has been specially associated, for extremely chronic, obstinate, limited patches. In what he terms disseminated ringworm, where the disease seems cured, but careful examination reveals here and there isolated diseased stumps, the application of croton oil to the stumps themselves seems a rational and effectual mode of treatment, and withal safe. The book exhibits much careful study, and is written with an earnest and convincing tone. In its improved form it must be still more valuable than it has previously been found to be.

A Handbook of Therapeutics. By SIDNEY RINGER, M.D., Professor of the Principles and Practice of Medicine in University College, London. Ninth Edition. London: H. K. Lewis: 1882.

WE have on several occasions expressed our high approval of this excellent work. We are glad to see that it has reached a ninth edition, and have great pleasure in stating that the author has succeeded in including "the various new facts that have come to light since the issue of the last edition." This *Handbook* is now well known to students and practitioners as the best work on therapeutics in our language. The work is devoted entirely to therapeutics as distinct from materia medica, and on that account can never serve for a text-book on materia medica without the aid of some other manual. It would be an advantage alike to students and teachers if the two subjects were separated in the medical curriculum, and in that case the work of Dr Ringer would have no rival as a text-book on therapeutics. We heartily commend this edition to our readers.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING VII.

Wednesday, 3rd May 1882.—Dr GEORGE BALFOUR, *President, in the Chair.*

I. *Dr Allan Jamieson* showed a CHILD suffering from a comparatively rare form of skin disease, viz., *lichen circumscriptus.* It was to be seen both on the trunk and limbs, a thing which in itself was very rare, as it hardly ever affected the limbs. The child, which had been very healthy, began to suffer from it in February last. It commenced as little spots or macules, which rapidly extended. The patient was seen first on the 13th March, and the disease was not then so extensive as now. It itched very considerably. It had been treated with arsenic internally and a soothing lotion externally, as Liveing recommended, but without much effect, each dose, according to the mother, seeming to make it worse. Besides the spots of lichen circumscriptus, there could be seen others presenting an appearance like *lichen marginatus*—pinkish or reddish papules enclosing a fawn-coloured area. This had been recently described by Duhring and Guibert as *pityriasis maculata* or *circinata.* They had coined this new name, evidently unaware that the affection had been previously described. Another point of interest was that this seemed to link the lichen circumscriptus with the affection of *tinea tonsurans maculata* described by Hebra. Dr Jamieson had carefully examined the scales obtained from specimens of this latter disease, and no parasitic elements could be found in them. There was no doubt that they were forms of lichen. What the relation of the disease was to lichen scrofulosorum, which had no subjective symptoms, he could not say. Along with the case Dr Jamieson showed three drawings —one done by Mr Cleland from the case itself; another of lichen scrofulosorum; and a third, one of Wilson's plates, showing what he called *lichen annulatus serpiginosus*, but evidently *lichen circumscriptus*.

II. *Dr Kirk Duncanson* showed a HAY-SEED (in a bottle, which contained so many aural polypi and foreign bodies that the seed itself could not well be seen nor got out) which he had removed from the tympanic cavity of a cabman some days previously. It had got into his pharynx when he was eating some of the feeding stuff of his horse, and, passing into and along the Eustachian tube, found its way into the tympanum. He had suffered from pain in his throat on swallowing, and now came complaining of great pain deep in the ear. The membrana tympani, in its lower anterior segment, was protruding into the external auditory meatus. Dr Duncanson made an incision into the protrusion, and, laying hold of a foreign body with forceps, extracted the hay-seed by its proximal end.

III. *Dr M'Bride* read his paper on TINNITUS AURIUM, which will appear in a future number of this Journal.

The President said the full importance of this subject none could realize till they had a troublesome case under their own management. One of the worst he had ever seen was in the person of a remarkably fine-looking individual, and in her case it was entirely due to spanæmia, and was improved under drugs applied to the state of her blood. Her hæmoglobin was deficient, and as soon as it was restored to something like a normal condition she immediately got quite well. The Society was much indebted to Dr M'Bride for his most able and interesting paper.

Dr Kirk Duncanson agreed with what the President had said as to the value of Dr M'Bride's paper. It must have cost him a great deal of labour to get up all the facts and theories as he had done. The paper was one that he should like to read before saying much about it. He might state that he had just read of a rather remarkable cause of objective tinnitus aurium. He had got to hand, last night, the *American Journal of Otology*, in which there was an article on this subject. One case was given of a doctor in a pretty extensive practice who suffered from a crackling noise in his ears every night just after going to bed. He had no time to consult an aurist, but happened to mention his sufferings to one of his lady patients, who told him of a case she knew where the noise was found to be due to maggots in the pillow. The doctor examined his own pillow when he got home, and found plenty maggots, the pillow having gone far on the way to decay. A new pillow cured him.

IV. *Dr Batty Tuke* read his NOTE ON THE ANATOMY OF THE PIA MATER, which appears at page 1068 of this Journal.

Dr D. J. Hamilton agreed with Dr Tuke in his views regarding the arachnoid—that it should not be considered a separate membrane, but rather the outer layer of the pia mater. He hoped soon to show the Society specimens in which it was quite plain that the arachnoid had no existence as a separate and distinct membrane. Dr Tuke's description of the membranes, especially in connexion with the vessels, was infinitely more comprehensible than the old one. There was almost a spongy structure in some places, connecting the pia mater with what was called the arachnoid. In some brains this was much more marked than others. Preparations should be well injected to show this structure.

Dr Clouston said that, even granted the description Dr Tuke had given was correct, and assuming that the two membranes were practically identical, it came to be a question whether it was not a matter of convenience to give the outer layer of the pia mater another name, as it was certain that the functions of the two were different; the outer being to allow the brain a certain amount of motion, and the inner to act as a mesh-work to hold the vessels and lymphatics. In extreme atrophy of the brain at the end of general paralysis the arachnoid membrane was separated entirely, even over the convexity of the convolutions, by a pretty wide interval (sometimes as much as an eighth of an inch) from the pia mater, and only attached to it by a number of trabeculæ. The pathological changes to which the two membranes were subject were different in most cases. Even the microscopic appearance of the two was different when examined fresh or in frozen sections, and where the tissue had not been hardened and altered in appearance by reagents, as in the sections shown by Dr Tuke.

Dr Tuke, in reply, could not consider it convenient to adhere to error. He had endeavoured to show how much inconvenience had been caused by the prevalence of the erroneous theory of the existence of a separate arachnoid membrane. It had obscured the perception of the arrangement of the cerebral lymphatics. It was not usual to have anatomical nomenclature on the appearances of structures in a state of disease.

V. *Dr Clouston* read his paper on ALTERNATION, PERIODICITY, AND RELAPSE IN MENTAL DISEASE, which will appear in a future number of this Journal.

Discussion on it was postponed to next meeting.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING VII.

Wednesday, 8*th March* 1882.—Prof. SIMPSON, *President, in the Chair*.

I. *Dr Thatcher* showed preparation of a TUBAL PREGNANCY, which had burst. The patient had been seized suddenly with violent pain, and was dead before he saw her. On post-mortem examination it was found that a gestation sac in the left Fallopian tube had ruptured; the fœtus, about three months old, had escaped into the peritoneal cavity. He showed, also, a FŒTUS in which a portion of the anterior abdominal wall was absent, so that the liver and some of the intestines were protruded; and another in which the cerebral hemispheres protruded posteriorly.

II. *The President* read the following letter from Dr Ogilvie Grant, giving Professor Carl Braun's (of Vienna) first experience with the axis-traction forceps. It was of the more interest as Professor Braun had given an unfavourable opinion with regard to the working of Tarnier's forceps, and inexperienced and irresponsible writers in our own journals seemed disposed to introduce remarks deprecatory of the principle of the instrument, the value of which so many have now appreciated:—

"The case in which they were used was a case where a doctor tried to deliver with the ordinary forceps, but failed. Professor Braun was then called, and also tried the ordinary forceps, but without success. He then made up his mind to perforate, but before proceeding to do so he thought he would try your forceps. He then applied your forceps, and delivered the head without much difficulty. What surprised Dr Braun the most was the ease with which he performed the delivery, and also that the child was born alive and well."

III. *Dr J. Halliday Croom* then read a paper on CLINICAL AND EXPERIMENTAL OBSERVATIONS ON THE BLADDER DURING PARTURITION, which will appear in a future number of this Journal.

Dr Hart thought that Dr Croom's paper was a very valuable one, and displayed a great deal of originality. The amount of work implied in making so many observations and drawing up the tables must have been enormous. The reasons given in the first part of the paper for the difference between the results of Matthews Duncan and those of Haughton were quite valid. Haughton estimated how much pressure the uterus could exert, Duncan how much it actually did exert. An engineer always constructed a bridge so as to stand a strain very much greater than it is, as a rule, subjected to. There was one defect in Duncan's method, that he did not rupture the membranes by a frequently repeated pressure, as is the case in labour; Popel imitated the natural process more exactly by gradually increasing the strain on the membranes.

Dr Peter Young asked whether the fact that the patients lay on a soft bed might not affect the accuracy of the readings of the column of mercury.

Dr Barbour suggested that by keeping the patient deeply under chloroform the pressure due to contraction of the abdominal muscles might be eliminated.

The President said that the Fellows had all listened with interest to this paper, which would prove a very valuable contribution to their Transactions. It contained many observations of a quite original character, and which would, no doubt, prove of practical importance. This method of investigation had not, so far as he knew, been formerly employed. Hitherto experiments had been always made upon the fœtus. Sir J. Y. Simpson had tried, by means of forceps and the air-tractor, to ascertain what force was necessary to draw the fœtus through the pelvis, and found it to be 15 lbs. He had occasionally observed, during labour, the ring in the anterior fornix of the vagina referred to in Dr Croom's paper, but did not understand its significance; he had seen it also in advanced pregnancy, before labour had set in. With regard to the mode of transmission of the uterine force to the bladder, Dr Croom had made only a passing reference to the round ligaments; they might have a distinct action, though producing lateral compression when the head was in the cavity. Dr Croom's paper would prove a valuable stimulus to further research in the same direction.

IV. *Dr D. Berry Hart* then read his NOTE ON A UNIQUE CAUSE OF DELAY IN THE THIRD STAGE OF LABOUR:—On 17th February my friend Dr Hamilton Wylie asked my assistance at a case of labour delayed from hydrocephalus. His note stated that the fœtus had presented the breech, that this had easily passed the brim, but that the enlarged hydrocephalic head was firmly impacted there. On my arrival I found the puny body of the fœtus born, and the arms down. Abdominal palpation showed that the fundus uteri was high and markedly to the right, lying just beneath the costal margins of the right ribs. The enlarged head could be felt below and to the left side, arrested at the brim, but I could not make out any other special point. Perforation of the head below the ear lying posteriorly was easily accomplished, and after the gush of intracranial fluid had subsided, the delivery was at once accomplished. The placenta did not come away; and on palpating the uterus I found it flattened antero-posteriorly, and projecting little about the brim, just as one finds it immediately after the expulsion of the afterbirth. Dr Wylie had, in the meantime, examined, and found no placenta in the vagina. I therefore again tried expression, and again failed. In order to put an end to this state of affairs, Dr Wylie chloroformed the patient, and I passed my hand into the vagina. What I there found was as follows:—Passing my fingers within the flaccid cervix, I felt at its top the thickened end of the uterine muscular fibre. On tracing the cord my fingers passed towards the left into a flaccid bag, in which the whole placenta was lying loose, and from which I easily withdrew it. Bimanual exploration of this cavity revealed its greatly thinned condition and the fact that it was cervical. The whole case was now perfectly plain. The uterus, from its right obliquity, had pulled up the cervix more on the left side, and likewise driven the enlarged head with the cervix chiefly on the same side. There had, therefore, resulted an excessive left lateral dilatation of the cervix, which would easily have passed into rupture. After the birth of the head a large, flaccid cavity remained on the left side, and into this the placenta was born. The subject of cervical distention during delayed labour has been so frequently before our Society, and Bandl's views on uterine rupture have been so often considered here, that any further explanation of this unique case is unnecessary.

Dr Croom referred to cases reported by Underhill of retention of the placenta in a sacculated uterus. He had never seen a case similar to the one recorded by Dr Hart.

The President said that this condition had not been, so far as he knew, recorded. Dr Hart's explanation of the mode of its production was interesting and quite intelligible.

The following gentleman was elected a Fellow of the Society:—
Dr L. Ralston Huxtable, Melrose.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Salicylated Camphor.—In the *Annali di Chimica* Signor Prota-Giurleo of Naples describes a salicylate of camphor, or, preferably, salicylated camphor, which is said to have been used with success in the form of ointment in the treatment of lupus and violent ulcers. It is prepared in the dry way by heating 84 parts by weight of refined camphor in a porcelain capsule in a water bath to a temperature of 90° C., and then adding 65 parts of salicylic acid. The camphor immediately liquefies and the acid disappears, a very limpid homogeneous liquid being formed, having the density of glycerine, which, upon the lowering of the temperature a few degrees, solidifies to an opaque crystalline mass that takes an unctuous condition when rubbed with a pestle. The compound has a piquant, slightly bitter taste, leaving upon the tongue a suggestion of peppermint. It is soluble in water, glycerine, and in many fixed and volatile oils. Salicylated camphor may also be obtained in fine crystals grouped round a common centre by adding 84 parts of camphor to a suitable quantity of benzine in a flask, heating in a water bath until the liquid boils, then adding 75 parts of salicylic acid, continuing the heat until the disappearance of the acid, filtering whilst hot, and leaving to crystallize.—*Chemists' and Druggists' Bulletin*, New York, January 1882.

ACONITE *v.* SALICYLIC ACID IN THE TREATMENT OF RHEUMATISM.—Aconite has been very highly recommended in the treatment of rheumatism. I have given it in this disease with great advantage; and Dr Murrell, in his exhaustive letter on aconitine, or aconitia, in the Journal of 15th April, states that Gubler commends it highly for the relief of the pain of acute rheumatism and gout. I will briefly detail a case at present under my care, where aconite had a fair trial and failed, and in which the value of salicylic acid was immediate, pronounced, and general. A woman, aged 26, was admitted under my care at the North-West London Hospital, suffering from rheumatism of three weeks' duration; the temperature was 101° to 102°. The disease was complicated with nausea and symptoms of pericarditis, as well as with pains in the shafts of the long bones, and erythematous eruption on the legs. On admission she was treated by the house physician with a mixture the main ingredient of which was potassium iodide. This she took for several days without any perceptible effect, till I put her on a mixture containing two minims of tincture of aconite in combination with a little digitalis and fifteen grains of bicarbonate of potash, to be taken every three hours for twelve doses. It slightly lowered the temperature after the first day only, caused a copious perspiration, but was attended with no beneficial effect, either as regards the pains, the palpitation, or the fever. This mixture, with one minim of the tincture of aconite, was continued for nine days, but with no other effect. I then gave fifteen grains of the salicylate of soda in water, with the result that in three days the temperature was normal, the pain had disappeared, and the heart symptoms greatly relieved. This confirms to some extent the statement of Dr Maclagan that salicylic acid is not injurious to the integrity of that organ, and that in cases where it appears to be so the damage to the heart occurs in the natural and erratic course of the disease, often even before its manifestations in the joints become apparent (D. H. Cullimore, 54 Welbeck Street, Cavendish Square, W.).—*British Medical Journal,* 29th April 1882.

Bicarbonate of Soda in Tonsillitis.—M. Giné, Professor of Clinical Surgery at Madrid, affirms that the repeated application topically of bicarbonate of soda is of incontestable efficiency in tonsilitis. The powder may be projected through a tube on to the inflamed parts, or applied directly with the finger. The relief is often immediate and the cure often rapid, sometimes requiring but twenty-four hours. The application is rarely inefficacious and often aborts the disease in its prodromal stage. M. Giné also considers these applications of great benefit in hypertrophy of the tonsils, often obviating the necessity of amygdalotomy.—*American Medical Digest*, February 1882.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Large Sequestrum from Temporal Bone.—Mr Arthur Benson showed a piece of bone which had come away through an opening behind the ear of a child, M. C., 3½ years old. The specimen measured 1½ inches by 1 inch by 7-8ths of an inch, and comprised the greater part of the right temporal bone. The squamous, mastoid, and petrous portions were each well represented. The child had had otorrhœa for eighteen months previously, during the latter twelve of which she had been under Mr Benson's observation at St Mark's Ophthalmic Hospital. It was remarkable that, notwithstanding the extent of the necrosis, the child remained in excellent health throughout, showing no sign of cerebral abscess or pyæmia; nor was there at any time a trace of facial paralysis. The hearing power in the ear, after the removal of the sequestrum, was, "conversation voice" at one metre. A probe could be passed directly inwards to the extent of two inches along the sinus without meeting the slightest obstruction (Surgical Society of Ireland, Friday, 24th February 1882).—*Brit. Med. Jour.*, 15th April 1882, p. 543.

Loss of Hearing due to Purpuric Extravasation.—Dr A. E. Prince, of Jacksonville, Ill., U.S.A., was consulted on 21st Oct. 1881 by Mr T. M. C., of Laurenceberg, Ky., who reported that on the morning of the 14th he awoke and found that he could not hear any sound on the right side. The condition was accompanied by no dizziness or pain or other symptom. The tuning-fork vibrating being placed on the head or on the teeth, the sound was not conveyed to the affected ear, as is the case in conditions in which there is trouble of the sound-conducting apparatus, and to an ocular inspection there appeared to be no deviation from the condition of health. By the aid of these facts we were enabled, whatever be its nature, to locate the disease in the course of the auditory nerve, either before or after its entrance in the cochlea. In our attempts to discover an assignable cause or discover any constitutional condition we found that the patient was subject to attacks of purpura, and that he had had an eruption about the time when he noticed the loss of hearing. This gave us a clue as to what the probable etiology was, and, upon the supposition that there was a hæmorrhagic extravasation in the cochlea or about the auditory nerve, the prognosis was rendered favourable. Without any other treatment than an active saline cathartic, his hearing began to improve on the ninth day from that on which he lost it, and on the twelfth day it was as perfect as it had ever been. Dr Prince notices this case because it is one of extreme interest, and because a report of a similar case has never come within his observation.

THE VAGUS AND THE EAR.—In a series of experiments, as yet unpublished, which have been made by M. Wiett on the effects of stretching the pneumogastric nerve in rabbits, the effects on the ear were studied by M. Gellé. He found lesions in all respects similar to those which are produced by laceration of the medulla or irritation of the fifth nerve, hæmorrhages, and suppuration, with destruction or ulceration of the tissues. In one case the mischief was limited to the external auditory meatus, and consisted in a hæmorrhage into the lining membrane and periosteum of the lower wall. In another the meatus contained a still larger clot, and in the middle ear was a quantity of semi-solid, creamy pus, which filled the chamber and had escaped into the external auditory meatus through the membrana tympani, which was softened and perforated. The ossicula were displaced, with the exception of the stapes. The liquid of the internal ear was bright red in colour.—*Lancet*, 19th Nov. 1881.

SIMPLE METHOD FOR THE CURE OF OZÆNA.—Dr Gottstein (*Gazz. di Roma*) considers ozæna as a constant symptom of chronic coryza. There is no doubt that after the interference with the function of the glands there is a diminution and alteration of the nasal secretion. Part of it, drying rapidly, adheres to the mucous membrane, on which it forms crusts, and it is the decomposition of these which is the cause of the odour. It is, therefore, only necessary that a limited portion of the mucous membrane should undergo atrophy to give origin to an ozæna. In adopting this theory of ozæna it is evident that there can be no question of radical cure, since it cannot be hoped that the secretion of an atrophied mucous membrane can ever become normally re-established. We must, therefore, be satisfied with the treatment of symptoms, which is the most simple and convenient for the patient. The author was led by chance to employ the following method, from which he has already, in fifteen cases of ozæna, seen the best results in less than three months. Dr Gottstein commences the treatment with a nasal douche, which, by freeing the cavity from its secretions, permits the recognition of the character of the mucous membrane and the extent of the lesion. This is followed by the introduction of a tampon of cotton 3–5 centimetres long, which should remain in position for twenty-four hours. About an hour and a half after the introduction of the cotton there is a little secretion from the nose. When the tampon is withdrawn the secretion is found to be fluid and without crust or odour. Twenty-four hours can be allowed to elapse between two applications of the tampon. When both sides of the nose are affected, the nose can be tamponed every twenty-four hours on the alternate sides. The tampons cause an artificial contraction of the cavities, and so increase the action of the column of air and facilitate the expulsion of the secretions, which are absorbed as rapidly as they are formed, and their desiccation is thereby prevented.—*L'Union Medicale*, 27th Nov. 1881.

MENIÈRE'S DISEASE.—Pietro A., aged 51, an Italian harpist, dated his illness from about the beginning of November 1881. He then began to be troubled with noises in the ear, at first throbbing, but later hissing like the sound of escaping steam. Since then he had complained of giddiness, reeling gait, occasional vomiting and headache, and mental depression. The giddiness was worst when he was in bed. Objects appeared to move from left to right. At certain times the giddiness had become very severe, the hissing in the ears intense, and he had vomited. He had not been sick since admission (about six weeks), but he was deaf on the right side (the tuning-fork could be heard very imperfectly through bone, and not at all through air). When seen he did not present any appearance of disease, could walk without reeling, had a fair appetite, and could understand words addressed to him in an ordinary voice. He inclined slightly towards the right in walking, and said that he had a strong inclination to turn in that direction. Objects, he said, appeared to move towards the right, illustrating his statement by sweeping his hand from left to right. On March 16th the aural surgeon examined the patient, and reported that the right membrana tympani was indrawn and very much thickened. The right Eustachian tube was not fully open. A temporary improvement in the tinnitis followed inflation with the Eustachian catheter. The case seemed to be a fairly typical instance of the disease first described by M. Menière in 1861. The experiments of Flourens and others go to show that vertigo having the characters above described can be produced by injury of one horizontal canal. The apparent rotation of objects occurs towards the affected side where the canal is damaged only on one side. In a certain number of cases post-mortem examination has revealed lesions confined to the semicircular canals; but in others the phenomena seem to have been due to disease of the middle ear, which had set up pressure on the labyrinth and semicircular canals. In this case it will be noted that examination of the ear showed that the tympanic cavity was not in a healthy condition.—*London Hospital Reports.* (Under the care of Dr Stephen Mackenzie.)

PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

THE PRISM AS A MEANS OF DETECTING SIMULATED UNILATERAL AMAUROSIS.—Baudry (*Archives d'Ophtalmologie,* ii. 1) gives an interesting *résumé* of all the different plans which have been devised for forcing a simulant to unconsciously admit the presence of vision in the eye which he declares to be blind. Most of the methods are well known. That of Welz, which consists in placing a prism with the base outwards in front of the supposed blind eye, and observing whether this causes a convergent movement in the interest of binocular vision, or a corresponding divergence on withdrawal, can very rarely fail if there be good binocular vision, but often there is a considerable degree of amblyopia and an absence of binocular vision. In these cases a good plan is to produce monocular vertical diplopia or binocular at will by means of a prism held in front of the good eye. If the patient sees that he may have double images from one eye alone, he is apt to be thrown off his guard and confess to having diplopia, when such diplopia, from the position of the prism, can only possibly be binocular. The usual way in which this is done is to hold a prism with its base downwards in such a position that the apex lies across the pupil. Some of the rays, then, which pass through the pupil from the object fixed are refracted, and others not; consequently two images of the object are seen. Baudry has found it difficult in practice to produce the diplopia by this position of the prism. Owing to the divergence of the rays proceeding from the two images, the prism has to be very close to the pupil. The adjustment requires an amount of nicety which is apt to rouse the suspicion of the simulant. Baudry finds that with the base of the prism bisecting the pupil the diplopia can be produced with great ease, as the rays from the two images cross, and the prism can be held at a convenient distance from the eye. He has had a prism constructed in which the upper part is plane, and from the middle of which the glass is bevelled off. Two such prisms set together and caused to rotate in the same manner as the double prism of Herschel, or Stoke's lens, may be used for producing monocular diplopia, or at will three or four images.

CATARACT EXTRACTION WITH OR WITHOUT ANÆSTHESIA.—Dr Hasket Derby of Boston contrasts his results in 200 cases of extraction, one-half of which were performed under anæsthesia (ether) and the other half without. The number is perhaps rather small to have much value, but may be useful when taken along with the results of other operators. The following is his table:—

	100 Cases with Ether.	100 Cases without Ether.
Average Age	61·7	65·8
Loss of Vitreous	14	9
Duration of Treatment	18·3	14
Secondary Operation	22	14
Vision = 1	1	1
„ = 0·9	...	3
„ = 0·8	...	...
„ = 0.7	6	4
„ = 0·6	...	3
„ = 0·5	1	8
„ = 0·4	13	18
„ = 0·3	20	12
„ = 0·2	22	31
„ = 0·1	18	9
Successes, V = 0·1 and more	81	89
Partial success, V $\frac{1}{12}$ to $\frac{1}{60}$, but including ability to get about unattended	8	9
Reasonable prospect of success on performance of secondary operation	2	1
Failure	9	1
	100	100

Derby uses myotics before operating, and does not look at the eye until seven days have elapsed after the operation.

Correction of the Ametropia of Keratoconus by means of Hyperbolic Glasses.—In the Periscope of Ophthalmology for June 1880 I drew attention to the interesting results which Ræhlmann had got in conical cornea by a novel form of optical correction. Since then his method has been adopted with success by Schöler of Berlin, Dor, and Leroy. Ræhlmann gives (*Klin. Monatsblätter f. Augenheilkunde*) fourteen cases which have been thus treated. In some of these the improvement has been very marked. A great advantage which such glasses possess over any other form of combined spherical and cylindrical glass is their correction of the ametropia not only of the centre of the cone, but all over it, so that only with hyperbolic glasses is it possible for patients with conical cornea to see at all distinctly anything but that which they are directly fixing. They have also the advantage of being suitable at the same time for near and distant objects. Objects are not diminished as is the case with strong concave glasses. Ræhlmann has found that some forms of irregular astigmatism are wonderfully improved by the weak numbers of his hyperbolic glasses, inasmuch as they are often really cases of keratoconus, not, however, sufficiently pronounced to give rise to a visible cone. In such cases the equatorial sections of the cornea are circles, whilst the meridional sections are hyperbolæ. This produces, of course, an unequal degree of astigmatism at different points. These glasses have, however, one great disadvantage over spherical ones, viz., that they only correct fully when centred with the eye. Lateral movements of the eye are therefore associated with diminished acuity, and it becomes necessary for individuals wearing them to supplement such movements much more by movements of the head.

ELEPHANTIASIS OF THE UPPER LIDS.—Dr Teillais of Nantes (*Archives d'Ophtalmologie*) records an extraordinary case of elephantiasis of both upper lids, in which this hypertrophy had become so excessive as to produce blindness for four years from complete covering of the eyes. The patient was a woman of 75. The tumours were both successfully removed. That of the left eyelid measured 12 × 9 centimetres, and that of the right 7 × 6. (See a somewhat similar case referred to in Periscope of Ophthalmology, Feb. 1880.)

ATROPINE AND ESERINE IN GLAUCOMA.—In the February and March numbers of the *Ophthalmic Review* Mr Priestley Smith contributes an excellent paper on the indications for the use of mydriatics and myotics in glaucoma. The following are his conclusions:—

RULES CONCERNING THE USE OF ESERINE AND ATROPINE IN GLAUCOMA.

1. Eserine is not to be regarded as a specific remedy for increased tension in general; but as a means of combating the particular displacement of the iris, which, in a large class of cases, is the immediate cause of the excess of tension.

2. Atropine is to be regarded as inadmissible only in those cases in which dilatation of the pupil is likely to intensify the effect of the above-named displacement of the iris.

Primary Glaucoma.

3. In primary glaucoma, and particularly in its early stages, atropine and all other dilators of the pupil are to be studiously avoided.

4. Every case of primary glaucoma should be treated in the first instance tentatively with eserine; the eye should be re-examined within 24 hours. and, if the case be acute and severe, within a much shorter time, in order that operation may be at once undertaken if the tension remain unrelieved.

5. When eserine produces a full contraction of the pupil, it usually produces a reduction of tension and an improvement of vision, and in exceptional cases it effects a cure.

6. Eserine is usually to be regarded rather as a means of giving temporary relief and of placing the eye in a condition favourable for operation, than as a means of cure. Even when its beneficial action is most complete, the glaucoma is likely to recur and to become confirmed unless arrested by a timely iridectomy.

7. It is chiefly in very recent sub-acute or acute attacks that benefit from eserine is to be hoped for.

8. In simple chronic glaucoma contraction of the pupil by eserine may be associated with some reduction of tension, but it is unlikely that the benefit will be great or lasting. If operation be declined, or be deemed inexpedient, the pupil should be kept permanently contracted by eserine, so far as this can be done without causing irritation, in order, if possible, to retard the progress of the disease.

9. The strength of the preparation employed, and the frequency of its

application, should in all cases be the minimum which is sufficient to contract the pupil and to keep it contracted. A solution stronger than 2 grains to the ounce of water is probably never desirable, and in many cases a much weaker solution is to be preferred. The gelatine discs of Savory & Moore are a very convenient and trustworthy form of application.

10. When eserine proves powerless to contract the pupil, it will not reduce the tension or do good in any way, but, on the contrary, is likely to do harm by promoting hyperæmia, and should not be used further.

11. The period most favourable for operation is that during which the pupil still responds to eserine, but, in recent cases especially, iridectomy may still prove effectual after contractility of the pupil is lost.

12. As a preliminary and as a sequel to sclerotomy contraction of the pupil by eserine is almost a *sine qua non.* As a preliminary to iridectomy it is advantageous in so far as it reduces the tension of the eye, but it has the disadvantage of increasing the hæmorrhage from the iris. After iridectomy, while the anterior chamber is still empty or only partially reformed, eserine is apt to promote the formation of posterior synechia, and has been known to induce a fresh glaucomatous attack;[1] atropine, on the other hand, is certainly sometimes beneficial. Further evidence as to this point is wanted.

13. In those cases in which a condition closely resembling primary glaucoma is lighted up by an *intra-ocular hæmorrhage*, eserine must be used with great caution. It sometimes relieves, but it has been known to excite fresh hæmorrhage.

Secondary Glaucoma.

14. In secondary glaucoma associated with *posterior or anterior synechia*, eserine is likely to do harm rather than good; atropine may be useful in subduing inflammation, and is likely, if it influence the tension at all, to influence it beneficially. The same rule holds good for serous iritis, and, probably, for some other ill-defined inflammatory states in which the anterior chamber is deep rather than shallow.

15. Glaucoma following *needle operations on the lens* might possibly, in the absence of iritis, be relieved, for the moment, by eserine; but eserine is contra-indicated by the danger of setting up iritis; the speedy removal of the swollen lens is the rational treatment.

16. Glaucoma due to the presence of the *lens in the anterior chamber* is likely to be aggravated by eserine; if, when there is no excess of tension, eserine be employed in order to facilitate the removal of the dislocated lens by operation, it should be applied only a short time before the operation is performed, lest it should induce a glaucomatous attack in the interval.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. Milne Chapman, M.B., M.R.C.S.

Application of the Forceps at the Brim; a New Method. (H. Obissier, *Bull. Gén. de Thérap.*, 30th January 1882).—M. Obissier discusses *the application of the forceps at the superior strait*, speaking first of the difficulty and danger of its application above this point while the head is still mobile. Realizing this, version is often to be preferred, especially in a retracted uterus. In such cases as eclampsia, hæmorrhage from vicious insertion of the placenta, and some other emergencies, he considers the forceps alone equal to the conditions. Hatin's method of application is generally to be preferred, which consists in introducing the left hand in forced supination into the uterus upon its left side, then passing the left blade along it as a director. The hand is then changed to half pronation, being passed behind the head to the right side of the uterus, and the other blade passed similarly to the first. This is more difficult in execution than in description, and as a substitute the author recommends a method which he has himself adopted. The woman being in the classical position, the left hand is carried high up, as if the right blade of the forceps were to be applied. The head is fixed as firmly as possible with the fingers of the introduced hand placed between it and the uterus. The left blade of the forceps, well oiled, is then passed with the right hand, being gradually worked into position along the left hand as a director, its convex surface following the palm and readily adapting itself, on the left side of the uterus, to the fœtal portion. The left blade being in position and held by an assistant, the right one is passed in the same way to its proper position. The chief advantages claimed are, that the operation is done with a very small expenditure of force, the head remains fixed during the entire process, and one is not obliged to cross the arms and so work at a mechanical disadvantage, as in Hatin's method.—*New York Medical Journal*, April 1882.

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[1] Pflueger—*Augenklinik der Universität Bern.* Bericht über das Jahr 1880, p. 44.

VAGINAL OVARIOTOMY (W. N. Baker, M.D., Boston, *New York Medical Journal and Obstet. Review*, March 1882).—After relating a case of dermoid cyst which was first aspirated per vaginam, which subsequently suppurated and was removed, but where a fatal termination ensued owing to the escape of some of the contents into the peritoneal cavity, the writer says, "The success which now attends ovariotomy by abdominal incision renders the cases very few where removal by the vagina would be the better method, and I should limit it—First, to cases where the cysts are small and their contents bland, so that removal can be effected without difficulty, and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity. Second, to dermoid cysts so small as to be removed through the vaginal incision without evacuation. In the case of an ovarian cyst firmly adherent in the pelvis, I believe the best operation to be that of drainage into the vagina, with subsequent destruction by suppuration or by the cautery."

A CASE OF FUNGOSITIES OF THE BLADDER CURED BY SCRAPING WITH THE FINGERS (by Walter Atlee, Philadelphia, *Boston Med. and Surg. Journ.*, 30th March 1882).—Miss B., æt 19, had suffered occasional pain on micturition as long as she could remember. At 17 the pain before and during the act became severe, and there was a constant desire to empty the bladder. At 18 pus and occasionally a little blood appeared in the urine. At 19 her general health had suffered severely. The urine contained pus, bladder epithelium, triple phosphates, and blood of a bright red colour. The diagnosis made was foreign body in the bladder. The urethra was dilated, and the finger introduced through it detected nothing abnormal save the presence at the fundus of a "number of fungosities or soft growths, some of them more than a half inch in length and about one line in thickness." These were scraped off with the finger-nail, and the result of this simple operation was a perfect cure. The growths are described as having anatomically the same fundamental structure as the mucous membrane whence they arose, and as being simply excrescences of this membrane formed of granular amorphous matter, of cellular tissue in small quantity, and of fibro-plastic elements, covered with but not containing epithelium. References to the literature of this affection are then given.

SOME POINTS REGARDING THE DIAGNOSIS OF UTERINE ANTEFLEXIONS AND ANTEVERSIONS (by Clifton Wing, M.D., *Boston Med. and Surg. Journ.*, 9th Feb. 1882).—The author first alludes to the great differences of opinion in regard to this subject, and says the anteflexion or version of one gynecologist—conditions which he finds but rarely, and then has but little success in treating —is a very different thing from the anteflexion or version of his neighbour, who diagnoses these displacements very often, and easily relieves the great majority of them by the use of pessaries of one kind or another. In short, he attributes the difference of opinion to a want of precision in diagnosis, and would regard the great majority of the cases diagnosed as anteflexions or anteversions as in reality nothing of the kind, but simply instances of "sagging uterus" so called. To explain how anteversion may be thus simulated, he gives diagrams to show that where a uterus, through increase of its weight, descends somewhat in a line of its own axis, owing to this axis being at a right angle to that of the vagina, it, so to speak, doubles up a portion of the anterior wall of the latter and can be felt through it. In such a case the writer says that any pessary which will elevate the uterus and thus relieve its hampered circulation will do good, and gives his preference to the simplest kinds, such as a Hodge or an elastic ring. To explain how it is that a flexion can be felt at the junction of the body and the cervix if the case is not one of anteflexion, he says, "If, as is often the case, the uterus descends ('sags') so far that the cervix rests upon the floor of the pelvis, or, more precisely, the posterior wall of the vagina, the direction of the plane of the latter is such that it tends to press the neck of the womb forward. In certain cases, as the cervix is pressed forward the fundus falls backward and a backward displacement results, but in many other cases the fundus remains in its proper axis while the cervix alone is displaced from its normal direction. The result is the flexion which the examiner's finger detects, an 'anteflexion of the cervix,' if you choose so to call it, but an 'anteflexion of the cervix' purely secondary in its nature, and which requires nothing further in the way of treatment, as the rule, than that the uterus be so lifted that its weight shall not rest upon its cervix against the posterior vaginal wall. Take the weight off the bended cervix, and you may be pretty sure that the latter will soon regain its normal position and axis, and that it will rarely, if ever, be necessary to perform 'division of the cervix' with the knife in order to straighten the uterine canal, as has been done so often in the past in just such cases, and as is still advised in some of the text-books as a regular procedure."

Part Fifth.

MEDICAL NEWS.

EDINBURGH UNIVERSITY.

LIST OF CANDIDATES WHO HAVE PASSED THE FIRST PROFESSIONAL EXAMINATION FOR DEGREES IN MEDICINE AND SURGERY, —A. M. Adams, A. Alexander, N. E. Aldridge, J. A. Ashcroft. James Anderson, John S. Archibald, Samuel Arnold, H. T. Barton, John B. Bawden, Robert N. Bell, David Berry, Robert Beveridge, Richard Bland, Walter C. Bluck, Fredk. M. Blumer, Louis Z. H. Bouchet, W. F. Boycott, Alex. Brewster, Edward Bryden, C. G. Cassidy, Edward Chamberlayne, James A. Clark, James F. Cownie, Arthur L. Curtis, James H. Dawe, Herbert J. Dring, George G. Eyre, Alexander S. Ferguson, Thomas L. Ferrier, Arthur M. Fraser, David Fraser, Thomas Fraser, Robert Fullerton, Thos. A. Fulton, J. W. Gainer, J. E. Gemmel, Walter M. Gossip, Walter D. Grieve, Felix O. Guerin, William P. Harries, James Hindle, Herbert Hirst, William A. Holmes, Robert S. Hubbersty, Hugh C. Hughes, Job Hughes, James Hunter, James Hutcheson, Theophilus B. Hyslop, George A. John, Aubrey Johnston, George F. Johnston (with distinction), James P. Johnston, John Jones, Arwid L. Kellgren, Jas. Kerr, Wm. Laing, Charles N. Lee, Edwin L. Lees, Jas. A. Leishman, Louis H. Le Merle, William Little, Gerhardus S. Loubser, Reginald Lucy, William M'Culloch, Alex. G. Macdonald, Henry C. M'Ewan, William C. M'Ewan, John M'Gibbon, Alistair Macgregor, Ian D. Mackay, Wm. B. Mackay, John C. Mackenzie, Wm. R. M'Kinnell, Murray Maclaren, Alex. R. Macmillan, Thomas Monies, Upendra N. Mukerji, Neil G. Munro, Albertus Mybrough, Walter B. Nisbet, John W. Pare. Alexander Paterson, Emmanuel Portal, James H. Pringle, John C, Robertson, A. H. Robinson, William L. Ross, George T. Sinclair, Horace Smith, William Spettigue, Wm. H. G. Stephen, Benjamin D. Stewart, John R. Talbot, Mowbray Taylor, John T. Thompson, James B. Tierney, George J. E. Trotter, George A. Tullis, Edward Walker (with distinction), Thomas A. Watson, Frederick E. Welby, Stephen F. Wernich, Alfred B. Whitton, Arthur Wood.

LIST OF CANDIDATES WHO HAVE PASSED THE SECOND PROFESSIONAL EXAMINATION FOR DEGREES IN MEDICINE AND SURGERY.——George F. Alexander (with distinction), John Anderson, T. L. Bancroft, Theodore H. Barker (with distinction), W. H. Barrett, H. J. Barron, Minas M. Basil (with distinction), Basanta K. Basu, James A. Blair, John H. Brown, John N. Burns, George S. Cardew, James M. Caw, Edwin A. Chill, Ronald Clark, J. A. Clayton, Horace Cocks (with distinction), Francis G. Connor, William Cotton (with distinction), James Craig, William Cumming, (with distinction), James Dalgleish, Thomas K. Dalziel, Archibald Donald, Alexander P. Drummond, William Duff (with distinction), H. A. Dumat, Thomas E. Dyson (with distinction), Thomas J. Fletcher, Alex. Forbes, Arthur Fuller, M. H. Gardiner, J. E. Godfrey, R. Gordon, Jas. Graham, L. R. Gray, T. D. Greenlees, H. M. Hardcastle, R. D. Helm, James Heath, John Henderson, Robert S. F. Henderson, George Hewlett (with distinction), John Hutson, Robert Inch, R. W. Jamie, Charles H. Jones, David K. Keith, James Kerr (with distinction), Ernest Kingscote, J. A. Loudon, D. R. M'Arthur, B. F. P. Macdonald, John Macdonald, William F. Macdonald, George Mackay, Robert Mackenzie, Frank I. Mackinnon, John M'Lachlan, (with distinction), Charles M'Leod, William M. M'Pherson, Augustus A. Matheson, Farquhar W. Matheson, T. C. Meggison, A. W. T. F. Mickle, W. H. Miller, Robert P. Mitchell, Upendra N. Mukerji, J. A. J. Murray, J. A. Myrtle, Gustave P. Nicolet, Gerrit Nieuwoudt (with distinction), Owen R. P. Owen, Alexander G. Paterson, Donald Paterson (with distinction), Walter Petter, William L. Price, Joseph Priestley, G. M. Reid, James B. Roberts, T. M. Robertson (with distinction), Arthur Robinson (with distinction), J. R. Stevenson, James Stewart, Arthur J. Stiles, H. A. Tuxford, Richard Vassie, John Walther, Allan O. Ward, Edward H. Warner, G. de B. Watson, W. H. Weston, R. A. Williams, H. A. Wilson, H. G. Wilson, Theodore S. Wilson, Arthur C. Younan (with distinction).

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery during the April and May sittings of the examiners, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Matthew Ryder Draper, London, W.; James Alexander Mather, Tayport; Francis Bernard Norris, Edinburgh; Charles Cuberland Brodrick, London; Robert Wotherspoon Lindsay, Glasgow; Wesley Franklin M'Lean, Edinburgh; Charles Samuel Brewer, Manchester; Charles Sherard Leach, Edinburgh; Caleb St John Laurence, Madras; Charles Henry Eyles, Edinburgh; Robert W. Mackinstry, Armagh, Ireland; George Toussaint Girdler, Westminster; Thomas Moore Dawson, Liverpool; Moffat Young, Hartlepool; James Hargreave Manson, York; Samuel M'Cutchan Cowe, Dublin; Richard Crofts, Cork;

Searle Monteith Haward, Harrow; Charles Henry Freeman Underwood, Edinburgh; James Fairbairn, Keswick; Edward Knight, Sutton, Surrey; John Wood Lewis, Cork; Frank Squire Boreham, Lowestoft; Joseph Charles Blythe, Montgomeryshire; William Gunn, Edinburgh; George William Daunt, Cork; Hugh Owen Hughes, Denbigh: Charles Maxwell, Edinburgh; Samuel William Brierley, Edinburgh; Harry Albert Murphy, Bolton-le-Moors; Henry James Edwards, Windermere; Henry Jelfe Thornton, Edinburgh; Robert Dickie Bradford, Derry.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine on the 3rd of May, and were admitted L.R.C.P. Ed.:—Hubert Sextus Reynolds, Liverpool; William Browne, Beith, Ayrshire; William Arthur Martin, Liverpool; James Maclanahan Ferguson, Burnley, Lancashire; Francis William Streanshall Allison, Glasgow; Edward Corner, Bath; Arthur Robert Broom, Ottery St Mary, Devon; Gerald Nicholson, Wimbledon Park; George Richard Green, Modbury, S. Devon; John Charles Saunders, Sheffield; Henry Albert Layton, London; Herbert Alan Hosier M'Dougal, Winchester; William David Joseph Morris, London; Henry Maxwell Sloggett, Godalming, Surrey; Charles Penruddocke, Winchcombe, Gloucestershire.

OBITUARY.

JOHN BROWN, M.D., LL.D.

John Brown was born at Biggar on the 22nd September 1810. His father was Secession minister there, and superintended his son's education until 1822, when he was called to Edinburgh. John then went to Mr Steele's school, and afterwards to the Rector's class in the High School, then under the charge of the well-known Dr Carson. After attending some of the literary classes in the University he devoted himself to the profession of medicine. He was apprenticed to Mr Syme, and he often referred with pleasure to the fact that his apprentice fee purchased his master's "first pair of wheels." He began his practical work in Minto House, and all the world knows one case which he there attended—that of Ailie Noble, recorded by him long after in the story of "Rab and his Friends."

After finishing his studies at the University, he spent a year as assistant to a surgeon in Chatham, and, returning to Edinburgh, graduated in 1833, when he at once began practice. He was moderately successful, but did not obtain an extensive practice until the death of Dr John Scott, to a large part of whose practice he succeeded. In 1847 he became a Fellow of the College of Physicians, and for a considerable time acted as their librarian. In 1874 the University of Edinburgh conferred on him the degree of LL.D. He was appointed Assessor in the University Court by Mr Gladstone during his double term of office as Lord Rector.

In 1840 he married Catherine Scott M'Kay, who died in 1864. In 1876 he retired from general practice, but many of his patients, from their great personal regard and their confidence in his skill, continued him as their medical adviser.

During his later years he was occasionally laid aside from work by illness, which undoubtedly, more than once, was brought on by the anxieties of practice acting on his intensely sympathetic nature. Last winter all his friends were delighted to see his perfect restoration to health and to his former cheerfulness. In the beginning of May he caught cold, and was confined to the house, with symptoms which did not at first alarm his medical friends. A slight pneumonia, followed by pleurisy, was discovered by Dr Peddie on the 8th of May. The symptoms at first seemed to yield to treatment, but on the 10th he began to lose strength, and, sinking rapidly, died early on the morning of the 11th. He was attended by his life-long friend Dr Peddie, and during the last few days Dr George Balfour was also in attendance.

Among Dr Brown's earliest writings for the press are his criticisms in the *Witness* newspaper upon the pictures in the Exhibition of the Scottish Academy of 1846. He then wrote, at the request of Dr Hanna, editor of the *North British Review*, an article on "Modern Painters," which appeared in February 1847. This was followed, at several years' interval, by an elaborate paper on John Locke and Thomas Sydenham. He from time to time, in the lay papers, gave obituary notices of his more eminent professional brethren, parts of some of which were afterwards introduced in the *Horæ Subsecivæ,* published by his friend Mr Constable in 1858. The more purely professional papers contained in that volume, together with sketches of Scott, Syme, and Christison, were reissued a few weeks ago, as noticed in this Journal for May.

Notices have already appeared, and a fuller criticism and judgment may yet be expected, of Dr Brown's literary work. In this Journal special notice is called for of his position as a medical man. While he devoted his leisure hours to that general culture which has always distinguished the best physicians, he gave his strength to his professional work. The bent of his mind was such, that he sympathized with the great physicians of all times, and he has shown an appreciation of the character of many famous men, whose works are now apt to be forgotten amid the important discoveries of this age. He also fully appreciated, and took pains to make known, the great general worth and ability of our hard-worked country doctors.

There would seem to be two ways of acquiring that knowledge and skill which a successful medical man must have—one by the external study, observation, and experiment which an intelligent, not necessarily human, being might make on men in health and in disease, without any sympathy or sense of community with them; the other, from the inside, which only a *man* can exercise, in which, by loving sympathy and by close and accurate observation of the indications which he, from his community of nature with those whose cases he observes, can interpret, he attains a power of judgment which appears almost intuitive, and which, from its very nature, is incapable of statement in logical form.

We all recognise this power of judgment in moral matters; but it exists in medical matters too, and its possession makes the difference between the sagacious physician and the scientific pathologist. The methods of both must be employed, and Dr Brown did not despise or neglect the scientific side of medicine, though to him medicine was practically the healing art. In one of his writings, when addressing young medical men, he says, "Give more attention to steady common observation, the old Hippocratic *ἀκρίβεια*, exactness, literal accuracy, precision, niceness of sense; what Sydenham calls the natural history of disease. *Symptoms* are universally available; they are the voice of nature: *signs*, by which I mean more artificial and refined means of scrutiny—the stethoscope, the microscope, etc.—are not always within the power of every man, and with all their help, are additions, not substitutes. Besides, the best natural and unassisted observer, the man bred in the constant practice of keen, discriminating insight—is the best man for all instrumental niceties." What he advised his young medical friends to be, he was. But how can we tell what he was? how describe his simple yet infinitely complex character? If we may attempt its analysis, we would say that its fundamental principle was a perfect and loyal devotion to truth—not that coarse truth which is merely the negation of lying, but the pure essential truth which the seeing eye can somewhat perceive as pervading all the works of God, and the image of which is the only thing of any value in man. And as love was the source and spring of all his power, so this love of truth gave him that instinctive sense of the beautiful in art and literature which made him so excellent a critic—clear and certain, but also kindly and considerate. If he had to review an opinion, or an essay, or a picture, he did not begin, as most of us do, with the points to which he objected. If there were anything good in it, be began there; he did not spare the errors and faults, but treated them in a manner so friendly as to rob criticism of the bitterness which we are apt to think is of its essence. There was one exception—conscious, intentional, deliberate falsehood he hated with a perfect hatred, and it could rarely evade his keen and pure eye. But vengeance was not his, and where he could not bless he was mostly silent.

Most men, in their intercourse with their fellows, use certain current phrases, useful counters of speech which mean something or nothing, as the case may be, which we keep in our pocket and hand out one or two as occasion seems to require. He had none of these. His commonest remark to the porter who took his portmanteau at the station, or to the cabman who drove him home, to every one, high or low, with whom he came in contact, was fresh and original, made there and then, fitted to the occasion, and felt like a breath of fresh air. All natural and unaffected human beings were at once at home with him, and even the most artificial prigs gradually thawed in his presence.

It is a necessary consequence of such a nature that his writings reflect himself in an unusually clear and perfect manner. To them we must refer the reader if he wishes to learn something of his wisdom and humour and love. Those who knew himself will often refresh their recollection in this way, and bring back the tone of his voice and the gentle firmness of his beautiful face.

In private life Dr Brown was one of the most amiable and lovable of men. There was a charm in his manner and conversation which is quite indescribable; and there was also a singular balance in all his faculties, which precluded extremes, and never suffered degeneration into corrupt forms. He had humour in a very high degree, but it never for a moment merged into buffoonery. He had sense and wisdom of a rare kind, but they never became severe or overbearing. He was full of pleasant fancy, but it never interfered with his great practical insight and skill. He held decided views in theology, in politics, and in medicine; but he was, at the same time, perfectly tolerant of views opposed to his own, and ever ready to recognise the importance of diversities in human opinion. One instance of this was shown in his dislike to all exclusiveness in the admission to membership of scientific societies, such as the College of Physicians or the Royal Society. He had a remarkably clear insight into character; but though the weaknesses, follies, or vices of those with whom he came in contact seldom escaped him, he never seemed to be touched by any sourness towards his fellow-men. The only things of which he was impatient were pretentiousness, quackery, or falseness. Above all, he never showed any vanity, and while always ready to recognise good in others, he was very diffident of himself, forbearing and humble. In particular, it may be remarked that he was a sincere, humble, and devout Christian. His religion was not a thing that could be put off or on, or be mislaid or lost; it was *in* him, and he could no more leave it behind than he could leave his body behind. It was in him a well of living water, not for himself so much as for all around him. And his purity, truth, goodness, and Christ-like character were never more clearly seen than in those periods of darkness when they were hidden from his own sight. He very seldom spoke expressly of religion; he held "that the greater and the better—the inner part of a man, is and should be private—much of it more than private;" but he could not speak of anything without manifesting what manner of man he was, and his ideas on religion can be, imperfectly no doubt, but so far truly, gathered from his writings.

We conclude by quoting a passage written on one of the few occasions on which he broke through his habitual reserve on sacred subjects:—

"Good-night to you all, big and little, young and old; and go home to your bedside, there is Some One waiting there for you, and his Son is here ready to take you to him. Yes, He is waiting for every one of you, and you have only to say, 'Father, I have sinned—make me'—and He sees you a great way off. But to reverse the parable; it is the first-born, your elder brother, who is at your side, and leads you to your Father, and says, 'I have paid his debt;' that Son who is ever with Him, whose is all that he hath.

"I need not say more. You know what I mean. You know who is waiting, and you know who it is who stands beside you, having the likeness of the Son of Man. Good night! The night cometh in which neither you nor I can work—may we work while it is day; whatsoever thy *hand* findeth to do, do it with thy might, for there is no work or device in the grave, whither we are all of us hastening; and when the night is spent, may we all enter on a healthful, a happy, an everlasting to-morrow!"

We have the pleasure of adding to the preceding biographical notice the following most interesting letter, written by one who above all others had the right to do so, regarding the Minto House days, in which both friends, the living and the dead, began their professional life together:—

To the Editor of the Edinburgh Medical Journal.

15 RUTLAND STREET, EDINBURGH,
15*th May* 1882.

DEAR SIR,—I have your note of the 12th, requesting a short sketch of our dear departed friend Dr John Brown, in relation to the Minto House days.

This cannot be easily done without considerable historical detail. He was two years in advance of myself as a student of medicine, and had been apprenticed to Mr Syme fully one year before Minto House was opened (8th May 1829) as a surgical hospital and dispensary, by his spirited master.

John Brown during these two years did much earnest and excellent work, both as an assistant in private practice, and at the Hospital and Dispensary; and it was within this period that the incident occurred on which the inimitable story of "Rab and his Friends" was based. But when I joined Minto House in November 1830 as an apprentice of Mr Syme's—the thirteenth articled pupil at that time—and until the Hospital was abandoned by him in August 1833, when appointed Professor of Clinical Surgery in the University, with surgical wards in the Royal Infirmary, John Brown took less regular or active part in its work, but continued to show a deep interest in its design and success. He seemed to avoid putting his hand to any operative work, as if his nature was too tender and gentle to engage in the painful part of surgery,—for there were no anæsthetics in those days. But he frequently came to us at *the visit* and other times, giving pleasure to all—master, apprentices, students, nurses, and patients—by his quaint remarks and keen humour. He seldom appeared without a book under his arm; and, in fact, even at this period of his career while reading in view of graduation,—which took place in August 1833,—he was manifestly feasting on classical and general literature, and storing up knowledge and sharpening his intellect, which was turned to so much account afterwards, although, perhaps, to the loss of advancement, gain, and fame in the practice or literature of his own profession.

To enable you to understand better the history of Minto House and John Brown's connexion with it, you must excuse me mentioning my own relations to it during the three years above mentioned. From the first to the last day of that period, my whole time, with the exception of a few hours daily spent at classes and at home, was devoted to work in the Hospital and at the Dispensary, filling successively the posts of apothecary, dresser, clerk, class-assistant, and house-surgeon,—which last honourable position I occupied at the time when the institution had attained its highest point of prosperity and celebrity.

The Edinburgh Surgical Hospital had ceased to exist, although a lease of the premises had yet nineteen years to run; and as Mr Syme had still a number of apprentices whose terms of indenture would not expire for several years, and whose practical instruction he was pledged to promote, he conceived the idea of continuing Minto House as an hospital, with a few beds for the reception of private patients, and a public dispensary attached thereto. At his request, therefore, I undertook the charge of the institution and pupils, but before a year had expired I was laid aside with a severe attack of typhus fever, through which John Brown attended and nursed me night and day; and on recovery after a long convalescence I gave the remaining time of my apprenticeship to study for graduation in 1835.

One year and a half now passed after that period; and when Dr Brown and myself were settled in town as practitioners, our connexion with Minto House was renewed under the following circumstances.

Mr Syme, having struggled to maintain the institution at a very considerable outlay, without receiving adequate professional advantage from it, while he discovered on the part of his pupils little zeal or interest in it, and felt his inability to superintend them and the institution, advertised for the disposal of the remaining fifteen years' lease of the premises. Talking of this to me, I offered to take the premises off his hands from year to year at a diminished rent, in compensation for which he should retain his connexion with it as consulting surgeon, and at the same time have the beds at his disposal for any private patients on whom he wished to operate. I thus hoped to be able to maintain a *maison de santé*, or private hospital of twelve beds, and a public dispensary, by funds drawn from patients' boards at different rates; a resident pupils' board; ordinary attending pupils' fees; and donations from the public.

Mr Syme eagerly embraced this proposal, and suggested that I should invite two colleagues to share with me the responsibility of the undertaking. Accordingly I proposed Dr Brown, while he named Dr Cornwall,—who has many years since gone to his rest. The scheme having been submitted to them and accepted, the institution on its new footing was at once commenced (January 1837); and for ten years we carried it on, not perhaps, working quite equally in it during the last year or two, although most harmoniously, and successfully fulfilling the design for which it was intended. Now, however, Drs Brown and Cornwall resigned their charge on account of increasing avocations and other reasons, while I continued to carry on the institution during the remaining five years of the lease, until October 1852, realizing the expectation I always had of making it altogether self-supporting. Here I may be permitted to say that, at the time, this institution was unique in its character, was a decided success, and proved a blessing, not to the city merely, but to the country, from many parts of which patients came who could pay a moderate board, their medical treatment being gratuitous; and in regard to the Dispensary somewhat of the provident system was latterly established.

In the above narrative you may consider I have said as much about myself as of Dr Brown; but this has seemed unavoidable, as we were united to Mr Syme and Minto House in such a way that I could not enable you to understand our relations without the above detail.

Dr Brown could easily have attained a wider reputation in pure medicine than he did had he utilized his knowledge and made use of his pen more directly in its service; but literary and artistic tastes led him early into other fields of thought and culture, which no one, however, can regret who reflects on the widespread delight which his writings have given, and the powerful influence for good in many respects which they have exercised. In the exercise of his profession, even to the last, he was no routine practitioner, but was invariably regulated by those general principles which he had imbibed, and, like his old master, his remedies were few but well chosen, and new ones adopted only when their efficacy was well attested by others. He possessed in a remarkable degree and combination those qualities of mind and heart which are essential to a great physician—at least one to be loved and honoured. He had naturally quick and keen observing and penetrative powers, insight and foresight; in conduct he was gentle and gentlemanly; in feeling sympathetic, delicate, benevolent, and generous; and in him a strong undercurrent of spiritual life was constantly flowing, which made him thoroughly conscientious and honourable in all he said and did, and indignant at those in whom such traits of character were absent. This refined and highly strung nature accounted greatly for clouds which at times overspread his soul when painful or distressing circumstances arose, exciting in him deep emotion; and in better, happier times, there welled up from that same nature pleasurable feelings, expressing themselves on his intelligent countenance in sweet and loving smiles, or eliciting from him witty, quaint, or cheery sayings, which made him an immense favourite in society. To all who had the good fortune to know him intimately he was esteemed a most trustworthy and "beloved physician."

To myself his loss cannot be over-estimated. We were all through life as brothers—more than the most of brothers—and drawn closer together with advancing years; we were sons of the manse; born in the same year; our fathers belonging to the same persuasion; we knew each other as boys; were afterwards united as fellow-apprentices and hospital colleagues; closely associated in other positions in life; all along of mutual help and service in public and private practice; sharing in each other's joys and trials; entertaining like views on religion and in politics; never, in fact, having a difference with each other, but loving sincerely, and now, I trust, separated only for a time by death.

Pardon the length at which I have written, and for overstepping somewhat the limit assigned to me in your request. I am, yours very truly. A. PEDDIE.

All who read this interesting notice of Dr John Brown must cordially respond to Dr Peddie's closing estimate of his friend.

It is sad to think that his well-known figure and his calm, meditative gait, his intellectual, benignant, and, in old age, really beautiful countenance, with a smile of recognition for all, children and dumb animals as well,—shall no longer meet our eye on the streets of Edinburgh. *Abiit ad plures.* He has gone over to the majority. While earth is poorer, heaven is all the richer; for we may safely say, if ever a member of our noble profession manifested the Master's spirit in his daily life, it was the good and gentle brother whom we now deplore.

SIR JOHN ROSE CORMACK.

THIS distinguished Scotsman died, full of honours, at Paris on 13th May, after an eventful career. In this Journal his death cannot be allowed to pass without due notice. Sir John was one of its founders, and ever took the liveliest interest in its success.

A son of the manse, he was born in 1815 at Stow, a village on the Gala, 24 miles from Edinburgh, and at the parish school, the High School of Edinburgh, and the University, obtained the elements of a first-rate general and professional education. In the medical classes he found himself among a brilliant band of enthusiastic young men, all of them destined to reflect credit on their Alma Mater. Among these may be mentioned Goodsir, John Reid, Simpson, Edward Forbes, Samuel Brown, George Wilson, Samuel Wright, and Hughes Bennett. Even with such compeers, however, Cormack could hold his own, and distinguished himself not so much by striking originality or eloquence of expression as by unflagging industry in the accumulation of facts. This quality is well exemplified in his monograph on Creosote and his early papers on the Forms of Epidemic Fever prevalent in Edinburgh. He had a good figure and an excellent address, and he appeared to possess all the requisites necessary to constitute a successful practitioner. But at the special juncture the medical field in Edinburgh was ably occupied. Abercrombie, Davidson, Alison, Christison, Begbie, Scott, were in their prime; and there was a list of young men, Bell, Newbigging, Wood, Dunsmure, Douglas, Peddie, and Brown, coming rapidly to the front, with powerful local influence to back them.

Nothing daunted, Cormack settled in practice, entered himself as lecturer in our Medical School, and boldly commenced the *Monthly Journal of Medical Science.* The juncture was opportune; the old *Edinburgh Medical and Surgical Journal* had for some time shown manifest symptoms of decay, chiefly owing to the ill-health of the editor, Dr Craigie, but also due to its quarterly publication. The London weeklies had begun to stimulate the medical taste for professional news, and the craving north of the Tweed could not be satisfied with the tardy utterances of the old quarterly. At first, as may easily be supposed, the difficulties attending the launching of such a venture were very great; but Cormack had youth on his side and much enthusiasm, and the journal rapidly gained ground, extinguishing one or two rivals which, tempted by his success, tried to gain the confidence of the public. It was, however, at that time, uphill work at the best to undertake the drudgery of a monthly journal and to push one with a new name in the colonies and elsewhere. The El Dorado of medical advertising was not yet discovered, and, successful although it was, the Monthly Journal could not be regarded as financially a lucrative venture. Like a true Scotsman, Cormack cast his longing eyes southwards, and finally determined to try his luck in London or its immediate neighbourhood, and he finally settled down in Putney, where Syme found him when he made his erratic visit to London in 1848. But the ordinary details of suburban practice were not sufficient to satisfy his craving for work. His ready pen and capacity for organization found scope in the editorship of the Association Medical Journal, and amid many difficulties, financial and otherwise, Cormack did his utmost to raise the character and circulation of the Journal, which, as the *British Medical,* now ranks as one of the leaders of professional opinion in the country, and is deservedly so popular.

There can be no doubt that up to this time Cormack's career had partaken largely of that of a free lance, and had been sadly chequered. But the indomitable energy of the man was not to be repressed, and, like the Scotch soldiers of fortune of the olden time who went to the Low Countries for renown and a competence, he crossed the Channel and settled in Paris. Here he was again favoured by fortune. The principal English physician, Sir Joseph Oliffe, was advancing in years, and ultimately died, leaving the field open, and Cormack, with his impressive figure and engaging address, quietly but surely took his place. He became physician to the Embassy, and apparently had settled down for the remainder of his life as what may be styled a fashionable physician. The Second Empire was in its glory, and Cormack, now decidedly conservative in his views, was basking, so to speak, in the sunshine of imperial prosperity, when the Franco-German war broke out, and in a few months he saw, to his consternation, all his dreams of an "*otium cum dignitate*" rudely dispelled, and he was suddenly brought face to face with what was to him, at the time, apparently irretrievable domestic disaster. But here, to his honour and sagacity be it said, Cormack recognised the path of duty, and also his opportunity, and he boldly determined to cast in his lot with the people among whom he lived. His professional experiences now became of a most romantic character, and it was highly interesting to hear him in after years give his recollections of that fearful winter when Paris was so closely beleaguered—when the streets for months were without a light of any kind, and when food itself was a scarcity. After the surrender of the capital his position as a medical man of a foreign nationality became embarrassing, and, in the subsequent civil war, highly dangerous. Cormack did not, however, hesitate for a moment as to the course which he, as a practitioner of the healing art, should follow. Taking his stand on the cosmopolitan character of his profession, he freely gave his services to friend and foe alike, and whether the wounded belonged to the Versailles party or the Commune, they equally shared his skill and words of comfort. The old alliance between Scotland and France even now bore fruit, and this Scotsman, whose word was his bond, became the trusted *confidant* of both parties, and in after years it was often hinted that the Scotch surgeon, if he liked, could endanger the position of some of the leading politicians of France. What made Cormack so important in this dread emergency was the exercise of what had hitherto lain unused in his professional *répertoire*. Suddenly called on, in addition to his strictly medical functions, to discharge the duties of a hospital surgeon, he rose to the occasion, and, to the surprise of all, developed qualities of dexterity and diagnosis which would have done no discredit to any of our military surgeons. He was a successful operator, and, relying on his old training under Liston and Syme, by the simplicity and cleanliness of his dressings he effected a notable reform in the hospital management at that crisis, and diminished in a remarkable manner the mortality of the wounded. Single-handed he could not have achieved such a marked success; but in Sir Richard Wallace, Cormack found a willing and able coadjutor who spared no expense to make the "British Hospital" what such an institution should always be, a model of cleanliness and good management.

Order was finally restored, and when all the facts of the arduous struggle came to be told, Cormack's exertions were not forgotten. Honours came thick upon him. He was knighted, decorated, and publicly thanked. Reinstated in his former position at the Embassy, and enjoying the full confidence of Sir Richard Wallace, the British Hospital, to be known henceforth as the Hertford, was reorganized on a more complete scale, and took its place among the recognised institutions of Paris. As this capital regained its prosperity so did Sir John's practice increase, and after an unsettled career it might truly have been recorded of him that "at evening time it was light." Amid severe domestic sorrow he had much to comfort him. Full of honours, with troops of friends, and a recognised position, he might well have looked forward to honourable repose; but rest to him was an impossibility, and he worked on, it is to be feared now, with detriment to his health, which had never regained its former tone before the great siege. Sir John paid frequent visits to this country, notably on the occasion of the meeting of the British Medical Association at Edinburgh in 1875, to the Social Science Meeting in the same place in 1880, and to the International last year in London. He was now visibly failing. Repeated urinary attacks still further undermined his enfeebled health, and in one of these he finally sank. With no parade of religion, Sir John was a true Christian, and bitter though the pang was to leave those near and dear to him, he still could calmly brace himself for the final struggle. It was characteristic of the man that he should address Professor Ball, who kindly attended him in his last illness, with the words, as the end drew nigh, "*Moriturus te salutat.*"

In 1876 Sir John published his *Clinical Studies* in two volumes, and dedicated them to his patron, Sir R. Wallace. They are the records of a busy life, and embrace a wide range of subjects—from epidemic fever, puerperal convulsions, and air in the veins, to poisoning with chloroform, and cases of surgical interest. These, although evincing great professional ability, do not constitute Sir John R. Cormack's chief claim to remembrance. It is rather what may be called the romance of his career, coupled with his great kindness of heart. His loss will be widely felt by those of our countrymen who yearly make Paris their home, or pass through it on their way to more genial climes, and especially will he be missed by that poorer class of couriers and governesses who, when stricken with illness in that great city, had no helper but Sir John.

He has left many friends in Scotland to whom his memory will always be pleasant. Lady Cormack, a son, and four daughters survive him.

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